JPRS 84226

30 August 1983

USSR Report

ECONOMIC AFFAIRS

No. 1060

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

JPRS 84226

30 August 1983

USSR REPORT

ECONOMIC AFFAIRS

No. 1060

CONTENTS

REGIONAL DEVELOPMENT

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

INCREASE OF INTENSIFICATION OF ECONOMY

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 83 pp 16-25

[Article by Academician of the Ukrainian SSR Academy of Sciences N. Chumachenko (Donetsk): "Intensification--the Factors and Means of Its Intensification"]

[Text] Over the past decade the changeover to the primarily intensive means of development of the national economy has been gradually carried out in our country. The 26th CPSU Congress specified this direction as the heart of the economic strategy of the party. The results of the development of the national economy confirm the correctness of this strategy. The country has made substantial progress in the creation of the material and technical base of communism. The output of industry has increased as compared with 1975 by 34 percent, agriculture--21 percent, the productivity of national labor--24 percent. During 1976-1980 and in 1981 more than three-fourths of the increase of the national income was obtained by the increase of the productivity of national labor.

What is the essence of the intensification of the economy? What are the reasons and prerequisites of the changeover to the primarily intensive means of development? The answers to these questions also make it possible to determine the most important factors of the accomplishment of intensive development.

K. Marx in "Capital" said that "over certain intervals of time reproduction, and, if we view it from a social point of view, reproduction on an expanded scale, occurs: expanded extensively, if only the field of production is expanded; expanded intensively, if more efficient means of production are used."[1] Consequently, such development of the economy, which is accomplished not by the additional commitment of resources, but by the use of more and more efficient means of production, is called intensive. The placement into operation of new productive capital, the enlargement of production areas, the increase of the number of personnel and the expansion of the use of natural resources are grouped with the factors of extensive development. The factors of intensive development promote the increase of production efficiency and characterize its qualitative aspect: the increase of labor productivity, the output-capital ratio and the return on capital investments and the decrease of the capital-output ratio, the materials-output ratio and the production cost of products.

---

1. K. Marx and F. Engels, "Soch." [Works], Vol 24, p 193.

The intensification of the economy appears most clearly in the increase of the productivity of living labor, which depends on the increase of the capital-labor ratio, that is, the increase of the amount of productive capital per worker. In economic practice two basic forms of the increase of labor productivity are observed: the capital-intensive form, when the capital-labor ratio increases more rapidly than labor productivity, and the capital-saving form, which ensures the rapid increase of labor productivity as compared with the capital-labor ratio. As was noted at the November (1982) CPSU Central Committee Plenum, the changeover of our economy to the path of intensification and the turn to efficiency are still being carried out slowly, the growth rate of the main indicator of efficiency--labor productivity--is unsatisfactory. As compared with 1970 the volume of industrial output has increased by 84 percent, labor productivity--61 percent, while the capital-labor ratio has increased by more than twofold. Consequently, the capital-intensive form of the increase of labor productivity is being maintained in industry of the country.

The indicator of the increase of labor productivity without a link with others, particularly the dynamics of the capital-labor ratio, represents one-sided, partial intensification. In the 1980's the transition has to be made to comprehensive, or complete, intensification, which implies the qualitative improvement of all the factors of production.

Extensive and intensive factors are in effect at every association and every enterprise. It is entirely a matter of their ratio. During the postwar period the use of primarily extensive factors was characteristic of our economy: enterprises were restored and new enterprises were built, new territories were developed, additional manpower and natural resources were committed to production.

The entrance of our country into the stage of mature socialism and the development of the scientific and technical revolution created the prerequisites for the changeover from primarily extensive to primarily intensive development. A number of factors which created such a need had also emerged by this time. Four groups should be singled out in their aggregate.

First, a mighty and highly developed economic, scientific and technical potential was created in our country. Suffice it to say that during the period since 1965 alone the fixed production capital has increased by more than threefold. Therefore, when accomplishing the task of the maximum satisfaction of the needs of the members of socialist society, it is necessary to improve the use of this potential and to increase its return.

Second, the possibility of the further attraction of additional resources, first of all manpower resources, is decreasing. During this decade the increase of new workers in the national economy may come to not more than 5 million. The conditions of the extraction of minerals and other natural resources are worsening (for example, many mines in the Donbass are beginning to develop deeper beds, in which the working conditions are becoming complicated).

Third, intensive growth is becoming economically more profitable, since it provides an increase of output with the minimum expenditures of resources. Thus, the expenditures on measures, which are connected with the saving of 1 ton of rolled ferrous metal products, on the average are 40 percent less than on its production. Here nonrenewable natural resources are also being saved.

Fourth, a number of factors, which are complicating economic development, such as the increase of expenditures in connection with the development of the east and the north, enviromental protection and the fundamental reorganization of old enterprises, are appearing.

The 1970's are a significant stage on the path of the intensification of the economy. During this period such sectors as nuclear machine building, space and laser technology, the electronics, microelectronics and microbiological industries were newly created or underwent further development. In agriculture of the country the intensification of production made it possible with a decrease of the number of workers to increase the volume of output per hectare by 1.3-fold as compared with the preceding decade. All this created the prerequisites for the successful accomplishment of the tasks on the complete intensification of the economy in the 1980's.

The most important factor of the intensification of the economy is the acceleration of scientific and technical progress. The implementation of measures of scientific and technical progress are providing a saving in the expenditures on the production of output and the decrease of the materials-output ratio, the increase of labor productivity and the increase of the output-capital ratio and the profitability of production. Moreover, a social impact is also being achieved: working conditions are improving, the attractiveness of labor is increasing, manual and difficult physical labor is decreasing. The importance of scientific and technical progress in the increase of labor productivity can be illustrated by examples from the coal industry. Nearly three-fourths of the coal in mines is now being extracted in completely mechanized faces. By the end of the 11th Five-Year Plan the level of mechanization in stoping will be increased to 74 percent as against 67 percent in 1980. In recent years the production of powered supports, stoping and tunneling machines and spare parts for mining equipment has increased. Equipment and technology, which will make it possible to do without the presence of a person at the breakage face, are being developed. It is planned to completely mechanize the work in the seams with especially complicated geological mining conditions.

However, the analysis of the work of the coal industry shows that the production of fuel is lagging seriously behind the needs of the national economy. In the Donbass, for example, in recent years the volumes of coal production have been decreasing with an increase of labor expenditures. The production capacities for the output of coal are being used at the level of 96 percent. This is explained not only by the changes of the geological mining conditions of production, but also by the unsatisfactory use of the reserves of the increase of the production of series-produced equipment and the making of new equipment. The rate of the development and assimilation of new equipment has slowed in recent times. Whereas in the early 1970's all the types of powered supports had been series produced for not more than 5 years, now they have not been updated for more than 10 years.

By the end of the five-year plan the production of coal in the country will come to 770 million tons. In order to achieve this level, it is necessary to use more and more extensively the achievements of scientific and technical progress.

A number of measures on the intensification of the national economy and the increase of its efficiency are outlined by the State Plan of USSR Economic and Social Development for 1981-1985. The ratio between the amount of capital investments and the

increase of the national income is changing: the growth rate of capital investments is decreasing, but this is being offset by the change of their structure. It is well known that the renovation and retooling of an operating works are much more effective than new construction: the increase of production capacities is achieved on the average threefold more rapidly and with significantly fewer expenditures, the need for manpower decreases. For example, with respect to the renovated machine building enterprises of Donetsk Oblast labor productivity as compared with the period prior to renovation increased on the average by 52.4 percent, the conditional release of workers came to 11,200. With the complete assimilation of the design indicators at these enterprises labor productivity will increase by 68 percent. A similar situation is being observed as a result of the renovation and retooling of the enterprises of other sectors of industry of Donetsk Oblast.

An important component of intensification is the overcoming of the tendency for the output-capital ratio to decrease by means of the improvement of the use of productive capital. This trend, which originated in the 1960's, is reflected in the table.

Indicator	1965	1970	1975	1980	1981
Total volume of industrial output, billions of rubles.	229.4	374.3	511.2	616.3	635.3
Fixed capital in industry, billions of rubles.	168	255	385	554	592
Output-capital ratio:					
per ruble, kopecks	136.5	146.8	132.8	111.2	107.3
as a percentage of 1965.	100	107.5	97.3	81.5	78.6

The lag of the growth rate of the gross national product behind the growth rate of the fixed production capital in the end attests to the worsening of its use and the decrease of the output-capital ratio.

The worsening of the geological mining conditions of the extraction of minerals has an adverse influence on the output-capital ratio (thus, for the mines of the Donbass, which mine anthracite, the maximum and minimum amounts of the output of products per 1,000 rubles of fixed capital range from 59.4 to 10.6 tons). Another reason is the existing practice of pricing. Frequently the price of a new machine, machine tool and instrument per unit of their productivity is considerably higher than for the one being replaced, in connection with which the capital-output ratio of a unit of the product being produced increases.

For the increase of the capital-output ratio it is necessary for the labor productivity to increase more rapidly than the capital-labor ratio, but frequently the opposite occurs. Thus, during the 10th Five-Year Plan in industry of the Ukraine the capital-labor ratio (with respect to the active part of the capital) increased by 33.4 percent, labor productivity increased on this basis by 12 percent. Such a lag stems from the inadequately efficient use of machines and equipment. These problems should be studied more thoroughly and find reflection in the state plans. Measures on the increase of the capital-output ratio as a most important factor of the intensification of the economy are envisaged in the 11th Five-Year Plan. But, as was noted at the November (1981) CPSU Central Committee Plenum, the tendency for the output-capital ratio to decrease in a number of sectors of the national economy has still not been overcome in the five-year plan.

In speaking about the role of planning in the increase of the intensification of the economy, the importance of comprehensive goal programs, which are being used most extensively when solving difficult scientific and technical problems, should be emphasized. Thus, the adopted programs are aimed at the development and assimilation of new highly productive machines and sets of equipment, instruments, items, materials and products; at the development and introduction of highly efficient technological processes; the development and placement into operation of automated control systems of production; at the solution of other most important scientific and technical problems in various sectors of the national economy.

In contrast to the past five-year plan in the programs not only the periods of the development and assimilation of new equipment and technology, but also the scale of their introduction by years are specified. Within the framework of these programs it is proposed to develop more than 4,000 models of new equipment and technological processes, about 60 percent of which it is planned to assimilate during the current five-year plan.

During the first year of the five-year plan the work on 4,000 assignments was completed, 602 new types of industrial products were assimilated, 133 new technological processes were introduced, 2,199 mechanized flow and automatic lines were put into operation, 983 sections, shops and works were changed over to complete mechanization and automation, 294 automated control systems of technological processes were put into operation.

The development of more than 300 types of agricultural machines and equipment is also envisaged by these programs, it is planned to assimilate the output of new highly concentrated mineral fertilizers. Equipment, which mechanizes nearly 40 of the operations now performed manually, will be developed for livestock complexes.

The goal program method is becoming more and more widespread in the national economy of the Ukrainian SSR. The Comprehensive Program of Scientific and Technical Progress for the Period to 2005, intersectorial goal programs and sectorial scientific and technical programs are being implemented on the republic level.

Various programs, which are a set of measures for the solution of regional problems on the basis of the intensification of production, have been drawn up in the oblasts, cities and rayons of the republic. Four regional scientific and technical goal programs--"Metal," "Machine Building," "Coal" and "The Donbass"--which are aimed at the decrease of the consumption of metal, the improvement of the technology and the complete mechanization of the working of thin, gently sloping and steep seams of coal deposits and the increase of the volume of production of blanks with the minimum machining allowances, have been formulated in Donetsk Oblast for the 11th Five-Year Plan. The use, for example, of the recommendations of the "Machine Building" program made it possible in 1981 to obtain an economic impact of 3.3 million rubles. The amount of use of advanced structural materials came to 267,000 tons, 13,600 tons of metal were saved.

The "Donbass" program is aimed at the solution of the most important scientific and technical problems, environmental protection and the maximum use of the waste products and byproducts of industry in construction and the production of construction materials. The fulfillment of the measures of this program since the first years of the five-year plan has been providing a great economic and social impact. For

example, a fundamentally new technology of producing rolling mills was introduced in accordance with the developments of the Institute of Electric Welding imeni Ye. O. Paton of the Ukrainian SSR Academy of Sciences. This made it possible to increase by nearly twofold the durability of the rollers, the economic impact comes to 600,000 rubles a year. The use of a pilot industrial waste treatment plant, which was developed at the Institute of Physical Organic Chemistry and Coal Chemistry of the Ukrainian SSR Academy of Sciences, at the Avdeyevka Byproduct Coke Plant imeni 50-letiya SSSR alone provided an economic impact of about 1 million rubles.

The use of the goal program method in the solution of the problems of associations and enterprises is yielding substantial results, to which the experience of the drafting of the comprehensive program of the improvement of the economic mechanism at the Chernomorskoye Shipyard for the period to 1990, the Nikolayev Production Association for the Production of Lubricating Equipment, the Novokramatorskiy Machine Building Plant imeni V. I. Lenin and others attests.

A promising directing of the acceleration of the intensification of the economy is the development and introduction of waste-free and low-waste technologies. The obtaining of new types of electric-welded, cold-strained and special-shape pipes can serve as an example of such technologies. The new types of pipes have already found application in agricultural machine building and electrical engineering, the automotive and food industries and in shipbuilding. The total annual impact from their use came to 42 million rubles. The technology of plasma cutting, which is based on the Kristall program-control machines and the Takt coordinatograph for the monitoring of control programs, is making it possible to increase the precision of the parts being cut out by four- to fivefold, to practically eliminate difficult manual labor and to increase labor productivity in assembly and welding by three- to fivefold. The production of 1 ton of items by the method of powder metallurgy instead of the traditional technology frees about 190 people and 80 units of metalworking equipment and provides a saving of up to 2 tons of rolled products per ton of parts.

These examples attest that the expenditures on the improvement of technology are very effective. The additional profit per ruble of expenditures, which is obtained as a result of the introduction of advanced technology, is 1.5-fold greater than from the expenditures on other directions of technical progress. The annual economic impact per ruble of expenditures is also greater. Such an efficiency of advanced technology is ensured mainly by the economy of material, fuel and energy resources.

The Institute of Technical Thermal Physics of the Ukrainian SSR Academy of Sciences has proposed a waste-free technology of the conversion of sugar beets into a powder which is used instead of sugar in the confectionary, baking, canning and other sectors of the food industry. In the case of its use the losses are eliminated, the yield of sugar increases, the consumption of energy decreases, the production cycle of the processing of the beets is shortened. As a result every ton of processed beets yields 250 kg of nutritive powder, in which the sugar content comes to 60 percent. A pilot production line has been set up at the Salivonkovskiy Sugar Mill of the Ukrainian SSR Ministry of the Food Industry.

It should be noted, however, that the rate of increase of the amount of work on the introduction of new technology is less than half the rate of increase of the amount of work on the other directions of scientific and technical progress. Such a ratio,

in our opinion, does not reflect the needs of the national economy. Consequently, it is necessary to increase the attention to the questions of the introduction of new technologies. A efficient system of the control of the "idea--production" cycle is needed for the stepping up of this work. New technologies originate in scientific research organizations. Their introduction takes place at enterprises, at which the main attention is focused on the output of previously assimilated, at times obsolete products. The lack in many cases of idle production capacities is also checking introduction. Under these conditions the managers of enterprises reluctantly agree to the assimilation of new technologies, in spite of the sufficient degree of their completeness and the obvious advantages over the ones being used at present. Therefore the planning and efficient organization of these operations in combination with economic stimulation are playing an important role in the implementation of new technologies, especially low-waste and waste-free technologies. The departments of the State Planning Committee and the appropriate ministries should contribute to a greater extent to the accomplishment of this task.

The requirements of the intensification of production should be taken into account when designing production facilities. The plans of the construction of new enterprises and the renovation of operating enterprises should include shops and sections for the complete utilization of waste products. There is the urgent need to develop and introduce in production special equipment for the processing of production scraps, since equipment produced for other purposes now has to be adapted.

The use of the slags of metallurgical production is highly efficient. Steelmaking slag was used during the construction of the oxygen-converter shop of the Zhdanovtyazhmash Production Association imeni 50-letiya Velikoy Oktyabr'skoy sotsialisticheskoy revolyutsii. Such a substitution made it possible to save raw materials, to decrease the amount of slag in the dumps and to reduce the expenses by more than 500,000 rubles. However, this positive experience has not yet received proper dissemination. Of the 4 million tons of steelmaking slags, which annually go to the dumps in the Donbass, slightly more than 1.5 million tons are converted into rubble.

The thermal electric power stations of the Donbass annually give to the dumps 5 million tons of ash and cinders. According to the calculations of the Institute of Industrial Economics of the Ukrainian SSR, the use of the method of the complete extraction of fuel from its incompletely burned mass in the amount of 10 to 25 percent in accordance with the technology of Donetsk Polytechnical Institute will make it possible to save by means of the decrease of the need for fuel at the electric power stations of the Donbass 1.5 million tons of coal worth 12 million rubles. Here the ash and cinder mix after the removal of the combustibles becomes a high quality raw material for the production of construction materials.

However, these reserves have not become a subject of the preplan studies either in the ministries or in the planning organs of the republic.

Under present conditions the importance of the work on the improvement of the organizational structure of the management of the national economy and the improvement of the work of the production and scientific production associations, which produce nearly half of the industrial output, is increasing.

The analysis of the experience of the formation and development of associations (for example, in the Ukraine) shows that many of them during the period of operation

achieved high results. The results of the work of the Kiev Elektromash Association imeni V. I. Lenin, the Lvov Mikropribor Production Technical Association imeni 60-letiya Sovetskoy Ukrainy and the Khmelnitskiy Production Association for the Production of Automatic Thermoplastic Machines imeni XXVI s"yezda KPSS, at which the production volume during the 10th Five-Year Plan increased respectively by 2.3-, 2- and 2.4-fold, while labor productivity increased by 79.8, 65.5 and 72.3 percent, are well known. Good results have been obtained at the Voroshilovgradugleremont Association, the Nikolayev Production Association of Construction Materials and associations of light and the food industries--the Polimer and Dnepryanka Associations, the Donetsk Cotton Combine imeni XXV s"yezda KPSS, the Voroshilovgrad Sewing Association, the Vinnitsa Baking Association, the Ternopol Production Association of the Beer and Nonalcoholic Beverage Industry.

The main impact in the case of the organization of associations is formed owing to advanced transformations in basic production, which account for about half of the total impact obtained at the leading associations of the Ukrainian SSR. The higher level of the use of the possibilities of improving the organization of basic production (approximately 1.5-fold as compared with the average sectorial level) was responsible for the twofold increase of the growth rate of the economic indicators at the best associations. It has been proven theoretically that the source of this impact, which provides an opportunity for the increase of the labor productivity at the enterprises being united by 50-100 percent, is the increase of the level of concentration and specialization and the achievement of the optimum sizes of individual works (casting, billet and others). Since in different sectors the proportion of the works, at which it is possible to carry out concentration and specialization, is different, the estimated increase of labor productivity at production associations fluctuates: in machine building--within the range of 60-80 percent, light industry--40-60 percent, the mining and food industries--10-20 percent.

However, the potentials of the increase of production efficiency by the creation of associations are being used far from completely. It is connected with the shortcomings, which were discovered both during their organization and during their operation. The analysis of 306 production and scientific production associations of the Ukrainian SSR showed that about half of them are complexes of mechanically united, previously independent enterprises which do not have production and technological ties with each other. For example, the Krasnoarmeysk Elektrodvigatel' Plant, which produces units for vacuum cleaners, is a part of the Donetsk Elektrobytmash Production Association, while the association specializes in the production of household refrigerators and washing machines. Such associations not only do not have advantages over independent enterprises, but adverse features of such a formal approach also appear in their activity: initiative and business ability and the efficiency in settlement arising questions decrease in the production units; the monitoring of their work on the part of local party, soviet and trade union organs worsens; the production units are deprived of participation in the all-union, republic, oblast, rayon and even sectorial socialist competition.

The potential impact of the association finds expression first of all in the specialization and cooperation of basic production, the centralization of auxiliary services and the improvement of the management and organization of production. The sampling analysis of a representative group of associations shows that these factors of the increase of the efficiency of the activity of associations were used adequately at less than one-third of the associations. Such an organizing document

as the Plan of the Creation and Development of the Association, in which the measures ensuring the acceleration of the increase of efficiency are elaborated and substantiated, has not acquired the proper significance.

Calculations convince us that if the associations had maintained the growth rate of labor productivity at the level of nonunited enterprises, industry of the country in 1981 with the same labor expenditures would have obtained additional products worth more than 30 billion rubles. This is a substantial reserve of the increase of the efficiency and intensification of production. Therefore, while continuing the work on the improvement of the general plans of the management of sectors, the results of the activity of every association should be subject to careful analysis, the means of their development should be determined and if necessary the unpromising ones should be eliminated.

The introduction of the brigade organization of labor is playing a substantial role in the increase of production efficiency. At many leading enterprises the indicators of intensification improved substantially due to this factor. For example, at the Volgogradskiy traktornyy zavod imeni F. E. Dzerzhinskogo Production Association 58 percent of the workers are working in brigades. In 1981 the increase of labor productivity in the brigades was twofold greater than for the association as a whole; the labor-output ratio was reduced by tens of thousands of standard hours. At the Donetskgormash Association 235 brigades of workers have been created, during the 10th Five-Year Plan alone by means of this the economic impact came to more than 50,000 rubles.

The experience of the leading enterprises and associations, at which the brigade form of the organization and stimulation of labor today is already the basic form, is of particular value. These are the VAZ imeni 50-letiya SSSR, the Uralmash imeni S. Ordzhonikidze and Zhdanovtyazhmash Production Associations; the Plant of Heavy Machine Building imeni 60-letiya Velikoy Oktyabr'skoy sotsialisticheskoy revolyutsii (Slavyansk) and the Donetsk Metallurgical Plant; the Kuznetsk Metallurgical Combine imeni V. I. Lenin and others. At the beginning of 1982 the number of workers employed in brigades came to 52.2 percent of their total number.

However, not everywhere is it possible to recognize as satisfactory the results of the introduction of the brigade form of the organization of and payment for labor. Whereas in some collectives labor productivity increased by 10-12 percent, in others an increase is not observed. And the reasons here lie in the fact that the brigade makes increased demands on the precise work of all the services and links of the enterprise, but they are far from always supported. Therefore when creating brigades it is necessary to improve material and technical supply, to ensure the balance of the plans and to improve the norm setting of and payment for labor and the management of the brigade.

Multiple-skill brigades, which meet present requirements, for the present make up two-fifths of all the brigades in industry, while multistage brigades make up 14 percent. During the 11th Five-Year Plan not less than two-thirds of all the workers of industry should work in newly created brigades, but much painstaking preliminary work in the collectives of enterprises is required for this. No capital expenditures are needed, the impact lies in the organization of labor, and it should be utilized in full. "It is necessary to create such conditions--economic and organizational--which would stimulate high quality, productive labor, initiative

and enterprise," General Secretary of the CPSU Central Committee Yu. V. Andropov said at the November (1982) CPSU Central Committee Plenum.[2] The brigade form of the organization of and payment for labor creates such conditions.

In conclusion it should be emphasized that the increase of responsibility and the tightening up of labor discipline at all levels of management contribute in every possible way to intensification. V. I. Lenin linked directly with "iron discipline during labor" the successes of the building of socialism. Work on the efficient use of working time, the reduction of its losses and the observance of state and labor discipline is constantly being performed in the national economy.

Strong discipline is an important reserve of production efficiency, which does not require capital investments, but yields an appreciable and, what is the main thing, an immediate return. Nevertheless up to now these possibilities have not been used completely in all sectors. Due to idle times, absences with the permission of the administration, absences without leave and unauthorized absences industry annually loses a significant amount of products. Thus, by means of the elimination of removable losses of working time in republic industry it is possible to increase the level of labor productivity by 2 percent. The losses, which are due to such violations of labor discipline as the late arrival at work at the beginning of the shift and after the lunch break, the early leaving from work before the lunch break and the end of the shift, idle times through the fault of the worker and others, are also very appreciable.

Although the enterprises have the right of dismissal for the systematic violation of discipline, such a step does not always yield appreciable results. Under the conditions of the shortage of manpower those dismissed for the violation of labor discipline at one enterprise are hired at another. The workers propose to dismiss such people only after their discussion at the workers' meeting and to change the conditions of their hiring for work at other places.

The decree of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU, "On the Further Tightening Up of Labor Discipline and the Decrease of the Turnover of Personnel in the National Economy," calls for the bolder use in the campaign against absentees and loafers of measures of public, material and disciplinary pressure. The need to tighten up labor discipline and to seek reserves at every workplace for the increase of labor productivity and production efficiency was emphasized once again at the November (1982) CPSU Central Committee Plenum in the speech of General Secretary Yu. V. Andropov: "The campaign against any violations of party, state and labor discipline should be waged resolutely."[3]

It is necessary to emphasize that in the matter of using working time a special role belongs to the increase of the level of the organization of production and labor and engineering support. The analysis of the use of time during the workday shows that its losses in many ways are connected with the shortcomings in the organization of labor, planning and the service of production. Thus, according to the data of a one-time study of 1980, the lack of raw materials, materials, parts,

---

2. "Materialy noyabr'skogo (1982 g.) Plenuma TsK KPSS" [Materials of the November (1982) CPSU Central Committee Plenum], Moscow, Politizdat, 1982, p 8.

3. "Materialy noyabr'skogo (1982 g.) Plenuma TsK KPSS," p 9.

intermediate products and assemblies brought about in industry of the Ukraine 35.6 percent of the idle times; the malfunction and repair of equipment--19.5 percent; the lack of tools, accessories, technical specifications and compressed air--15.2 percent. But these significant losses, as a rule, are not reflected in the documents and returns. The most effective means of their identification is a sample survey by the method of instantaneous observations. The systematic making of such surveys, the analysis of their results and the taking of organizational steps will make it possible without additional expenditures to increase the level of organization of production and labor, as well as production efficiency.

The increase of the responsibility for the observance of state interests and the resolute eradication of departmentalism and regionalism are associated with the problems of tightening up labor discipline. Attention is directed to this in the documents of the November (1982) CPSU Central Committee Plenum.

During the third, middle year of the five-year plan it is planned to accelerate the rate of development of the economy and to increase the absolute amounts of the growth of the national income and the output of industry and agriculture. Here the stepped-up assignments should be fulfilled with a decrease of the specific material and labor expenditures, for which, as was noted at the CPSU Central Committee Plenum, it is necessary to use more thoroughly and better the reserves which our national economy and each labor collective have. This will be an appreciable contribution to the accomplishment of the task of intensifying the economy.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Planovoye khozyaystvo" 1983

7807
CSO: 1820/125

PLANNED CHARACTER, PROBLEMS OF IMPROVING ECONOMIC MECHANISM OF MANAGEMENT

Moscow EKONOMIKA I MATEMATICHESKIYE METODY in Russian Vol 19, No 3, May-Jun 83 pp 397-406

[Article by N. P. Fedorenko, Yu. V. Ovsiyenko, and N. Ya. Petrakov: "The Planned Nature and the Problems of Improving the Economic Mechanism of Management"]

[Text] Planning is the central element in the management of our socialist economy. The entire course of the socio-economic development of society depends upon the degree of the scientific substantiation of plans, and the breadth of the coverage by planning of the various aspects of the economy's functioning. It is for this reason that the tasks of raising the level of programming and of economic management with a view toward the requirements of the stage of developed socialism is one of the top priority ones. In essence, it is a matter here of the conscious use in planning work of one of the fundamental economic laws--the law of the correspondence of the character of production relations to the level of the development of the productive forces.

Under the conditions of capitalism this law, as, incidentally, all other economic laws, operates anarchically. Changes in the system of the production relations of the exploitation system follow passively, as a rule, changes in the productive forces and, consequently, put a brake upon the development of the latter.

For the first time in the history of humanity socialist society poses and accomplishes the task of a conscious, planned, and scientific pre-vision of the development of the productive forces on a national scale. Corresponding to this, there is also a change in the system of production relations with the preservation and reproduction of their base--public ownership of the means of production which in and of itself presupposes the possibility for a single management of social and economic development, but not of concrete forms for carrying out planning. There occur other, mobile elements of the production relations of socialism which are connected with the state of the productive forces. Thus, the structure of social production has an important influence on the structure of the economic object, the types of product exchange, the principles for evaluating production activity, and so forth. In their turn, this determines to a large extent the forms of the manifestation of planning, and such concrete ways of managing the economy as the group of planning indicators, the organization of production, and the methods of economic stimulation and so forth.

There are more than enough examples of a conscious improvement of production relations under the conditions of developed socialism and of a corresponding change in the principles of management. Let us take note, in particular, of the appearance in planning of important new aspects such as long-term forecasts, overall economic programs, the emergence of economic calculation beyond the framework of individual enterprises to the level of associations and even of certain ministries, the rapid development of payment-by-the-job forms of the organization of production, and other phenomena which have been brought into existence by the material growth of society's productive forces. However, the necessary systematicalness is still lacking in the work on these matters.

The experience connected with managing our socialist economy confirms the above-cited fundamental proposition of Marxism. Indeed, the first economic plans were concerned primarily with the production and distribution of the basic types of output and with the corresponding financing. Gradually such other aspects of the functioning of the economy were included in them as an improvement of the organizational structure of management, of methods of stimulation (responsibility) for the fulfillment (non-fulfillment) of planning assignments, and so forth. At the present time we are faced with the issue of the overall planning of all of the elements of the economic mechanism.

Socialist society has to consciously set itself the task of a planned improvement of the system of production relations and of bringing this system into correspondence with the level of development of the productive forces: the consequence of this is the totality of the methods of the planned direction of the economy. It is under these conditions that production relations are transformed into a powerful stimulus for the further development of the productive forces. In other words, by virtue of its objective properties, the potentialities and advantages of socialism are realized not automatically, but only by means of the conscious planned activity of the whole of society.

This approach to the understanding of the category of planning has to become the basic one in the creation of a system of optimal functioning for the socialist economy (SOFE).

The history of research in the field of the development of the theoretical and methodological principles of SOFE can be conventionally divided into two stages.

At the first stage studies were made of such very important characteristics and distinctive features of socialist society as public ownership of the means of production, the requirements of the basic economic law, of the law of planned development, and of the law of distribution according to labor, and others, and less consideration was given to the concrete forms in which they manifested themselves in the real process of socio-economic development. This stage made it possible: to discover the basic initial preconditions of the SOFE; to develop a number of theoretical and applied models and their systems describing the development both of the economy as a whole and of its individual parts; to develop methods for solving optimization problems; to propose schemes of the hierarchical organization of the processes of managing the economy; to

construct a general, although still quite abstract, system of ideas about the single process of the optimal functioning of the economy; to prepare on this basis a number of planning and management schemes and methods oriented toward practice (a system of long-term forecasting, a system of overall planning,* local optimization tasks, and others); and to formulate qualitative conclusions concerning the essence of value parameters (estimates of natural, labor, and production resources and of economic normatives) and their role in the process of the planned management of the economy.

The consequence of this work was the formation of the preconditions for turning the theory of the optimal functioning of the economy into an independent discipline--the science of the general principles of the efficient conduct of the economy and of its management (in the broad sense) under developed socialism; ideas took form regarding its relationships with political economy and with concrete economic disciplines, and regarding the place of the theory of SOFE in the system of the economic sciences.

However, at the first stage insufficient attention was clearly being devoted to an analysis of the ways toward a gradual movement from the operating system of planning and management to SOFE. At the same time, it has to be noted that the benefit from this stage is indisputable. The scientific knowledge which was accumulated created the conditions for a gradual transition to the second stage which is characterized by an ever increasing coverage by studies in the field of SOFE of important social and economic tasks, and by an analysis and consideration of the concrete characteristics which are specific for the real economy of socialism, which, in the final analysis, leads to a strengthening of the applied direction of research.

Thus, there occurs a transition from the theoretical and methodological development work on the basic propositions of SOFE to their elaboration as concrete methods in an interconnected complex of proposals on improving the management of the economy. This new stage would have been impossible not only without the preliminary theoretical research, but also without the serious and varied studies of the real economic processes of the development of our socialist economy. At the same time, the turn toward the development of practical proposals aimed at an optimization of the system of management by no means signifies a weakening of attention to the problems of theory. On the contrary, the problems of the practice of economic construction and their analysis and interpretation serve as a powerful impulse for the distinguishing and setting of new theoretical problems, for ranking them by their real importance, and for verifying the degree of the scientific validity of the hypotheses being put forth.

One of the most important principles of the optimization approach to the examination of the economy is the systems principle; that is, a view of the economy

*Many of its propositions were used in constructing the automated system of planning calculations (ASPC).

as a single whole. This integrity of the socialist economic system was emphasized by the General Secretary of the CPSU Central Committee Comrade Yu. V. Andropov at the joint gala meeting of the CPSU Central Committee, USSR Supreme Soviet, and RSFSR Supreme Soviet on the occasion of the 60th anniversary of the formation of the USSR.

During the six decades of the existence of the Soviet Union a single all-union economic complex has been created. The idea regarding it as a single system is revealed in the theory of the optimization of social and economic development through the category of the economic criterion of optimalness. The basic economic law of socialism serves as the political and economic nucleus of this category. The methodological working out of the problems of the economic criterion in Soviet economic science represents in essence a consistent advance from the abstract to the concrete, from general formulations of the goals of the economic system of socialism to their ranking, to the quantitative measurement against one another of social and personal preferences, and, finally, to the construction of mechanisms of management which ensure the most effective disclosure of the social and economic interests of society as a whole and of its individual structural elements.

One of the most characteristic features which defines the evolution of research in the field of the economic criterion of optimality in recent years is a modification of the views of the relationship between this problem and the general theory of the management of the economy. Whereas in the past the problem of the criterion was regarded basically as a priori to the task of management, while the latter was reduced to the choice of an efficient distribution of limited resources in accordance with an exogenous assigned special function, at the present time the process of the formation of the economic criterion is organically included in the mechanism of management as an essential element. This approach raises a number of new scientific problems which require solutions. First of all, these are the problems of organizing the procedure for discovering priorities the importance of which was emphasized with especial force at the 26th CPSU Congress and results from the necessity for concentrating resources in directions which ensure an intensification of social production. In this field it is planned to have a clear advance from the demarcation (and even a certain opposition between) of the normative and statistical approaches to their synthesis. The normative statistical path of the formation of the criterion is without question an auspicious one, but it is only able to yield a genuinely positive effect when there has been a sufficiently deep treatment of a number of the theoretical and methodological problems of management. Among them, the following have to be pointed out in the first place.

First, this involves the development of methods for adopting decisions when there is incomplete information on the object being managed. Whereas important successes have been achieved in the field of the creation of deterministic mathematical economic (including optimization) models of planning and management which make it possible today to speak of the realistic nature of the solution of the problem of constructing a complex of interconnected planning and management models, the interest in economic systems which include unconsidered factors and processes

(that is, in the most complex cybernetic systems) has arisen relatively recently. However, it is precisely a consideration of the incompleteness of information in the development of economic management models which brings them closest to the properties of the real object under the conditions of scientific and technological progress, of the increased complexity of economic relations, and of the increased number of structural levels in management. The use of elements of normativeness in the formation of the economic criterion of optimality and, in general, of socio-economic priorities has to be based on a mandatory consideration of the probability character of economic processes.

Secondly, a study of the statistical regularities of the behavior of the elements of the economic system, and an estimate of the degree of their stability and, correspondingly, of the possibility of extrapolating these tendencies to the future presupposes the kind of organization of the mechanism of the functioning of the economy which promotes the most accurate disclosure of the real preferences of the participants in the economic process. An analysis of practice and theoretical studies convincingly demonstrate that these requirements are met by an economic system functioning in a balanced mode. A lack of balance brings about a material distortion of the information and frequently makes it unsuitable for the adoption of economic decisions.

Thus, from the point of view of the SOFE it is necessary to regard planned management as a single process which includes a number of interconnected aspects, among which the following should be distinguished first of all: information (the collection and processing of statistical information; the development and transmission to executors of managerial signals); model (forecasting and planning systems of models on various levels of the economy and with different time horizons); algorithm (the totality of mechanisms for discovering a system of social goals and priorities, and of methods for forming plans and forecasts with regard to economic possibilities and social needs, and also the direct and long-term consequences of decisions); stimulating (the determination of a system of participant's preferences; the development of such forms of transmitting planning assignments to executors and of principles of organizing the work of economic objects under which the social interests expressed in these assignments are perceived by collectives and individual workers as their own immediate ones).

An improvement of the methods of planned management presupposes a close synchronization of the activities of the economic agencies and economic services in each of the above-enumerated aspects. From the point of view of the SOFE it is necessary to have a uniform construction of the entire totality of planning, reporting, and stimulating indicators (including a system of long-term economic normatives) which follow from an optimal plan. Cost accounting acts here in a dual role: both as a derivative of the planned and as an inseparable part of the planning activity of the socialist state. In this respect, the planning of prices, profits, credit and monetary relations, financial flows, stimulation methods, and population income and expenditures represents one of the most important aspects of the optimization of economic processes. Violations in the planning of the economic normatives through which a stimulating influence

on production is achieved are just as undesirable as disproportions in the material-physical structure.

Sometimes one can still encounter over-simplified ideas to the effect that a strengthening of the role of planning is simply an expansion of the products list and assortment of output which is assigned by directive to each enterprise, association, and branch. The actual tendency as the economic potential develops and as its internal structure becomes more complex consists in a relative decrease in the number of such indicators which is the result of the practical impossibility and economic inexpediency of a detailed planning in kind. On the other hand, other aspects of planning increase in importance, including the development of the organizational structure of management which, as is known, has an hierarchical character. This springs not only from the great complexity of a modern economy, but also from such essential properties of it as the stochasticness and indefiniteness of many of its processes, and the interchangability of production resources and consumer goods. These circumstances serve as sources of the diversity of an economy as an object of management. To foresee in advance even over a relatively brief period at which sector changes will occur in production technology, in the amounts and relationships of various resources, and in the needs of society and individual elements, and, especially, to take account of all of these details in the development of a plan is practically impossible.

Thus, if the stochasticness and indefiniteness of economic processes is taken into consideration, the task of forming an all-embracing economic plan becomes many times more complex, becoming truly fantastic. Since the above changes systematically take place now in one and then in another sector of the economy, such a plan would have to be constantly reviewed. At the same time, it is known from practice that not every change in production has an equal effect upon the development of the entire economic organism. For example, the appearance of some new method of manufacturing some part has an important influence on the work conditions of a relatively small circle of local objects (sectors, shops, at the most--an enterprise), and is completely unnoticable for most other spheres and cells of the economy. But a major technical innovation, for example, the replacement on a wide scale of one type of fuel with another, the discovery and involvement in economic turnover of substantial sources of minerals, and so forth, as a rule, exercises an influence on the development directions of many fields of production and on the structure of the economy as a whole. Consequently, the very diversity of economic processes with regard to their influence on production makes it inexpedient to correct an entire economic plan when there is any local change in the conditions and factors of production.

Such a considerably important factor as the limited nature of the time available for the development of plans should also be taken into account. In many situations local objects have to make rapid decisions before a higher managerial agency takes account of changed conditions in a plant either because it is not possible in general for a delay to be tolerated, or because the lost time could lead to important losses.

Everything that has been said also relates to excessively detailed plans on lower levels of the hierarchical structure of management (the branch, association, and so forth). Here also managerial agencies are from the practical point of view unable to establish for subordinate objects detailed assignments for an entire output assortment, to constantly control their fulfillment, and to constantly review such plans with regard to the changes which systematically occur in the economic situation.

At the same time, practice testifies to the ever increasing role of the initiative of the "lower" levels of the economy in accomplishing the tasks of the planned development of the economy. This role can be observed both in the direction of a concretization and augmentation of the volume indicators of the centralized plan (counter-plans should be taken note of here in the first place) and in an improvement of the methods of organizing and managing production (team contracting and construction, the Ipat'yev method in agriculture, and so forth). Such tendencies are nothing other than a consequence of an expansion of democratic centralism in the management of the economy.

What are the basic conditions for the successful course of this process? Above all, a hierarchical organization of the system of management which, as has already been stated, is the natural consequence of the fact that any major economic decision includes an aggregate of more minor tasks. The development of the ways of accomplishing them and their accomplishment itself is made the responsibility of various elements of the organizational managerial structure. In its turn, such a fractioning of the procedure for making economic decisions which is objectively engendered by the complexity of the object of management makes it necessary to create special mechanisms which are "responsible" for the integrity of the system. The centralized planning and management of the economy presupposes the existence of the kind of information-signal system in the economy which would provide: 1) commensurability between the results of the economic activity of various objects; 2) the possibility of aggregating and disaggregating economic information; 3) an interest on the part of local production and managerial elements in increasing the integral effect of the functioning of the system as a whole (total economic effectiveness). If the interactions in the economic system are organized in such a way that all three of these interdetermined demands are complied with, it is possible to speak of ensuring an internal unity and coordination in the making of economic decisions, and of the effective work of the managerial mechanism, including forecasting, planning, the realization of plans, and control over their fulfillment.

The understanding of the fundamental importance of this problem, and of its significance for the organization of the entire process of the planned management of social production finds a reflection in the broad scope of the research, experiments, and measures to improve the system of planning and evaluative indicators which has been especially clearly observable in the last decade. In essence, ensuring the integrity of a complex economic system is a problem of creating a single complex of through measurers of expenditures and results and of economic effectiveness. No matter to what extent the technological processes in machine building and in the synthetic materials industry differ from one another, from the economic point of view the enterprises of these

branches have to act as homogeneous objects in order for their economic activity to be commensurate. Only in this case can a multi-branch production system appear in the form of a unified economy; only the complete economic commensurability of the various types of economic activity creates the real basis for the integration of branch economies into a general state economy.

The mathematical economist would call this requirement economic additivity. The problems of providing for it have been discussed in a quite detailed and profound manner in recent years on the pages of the press in connection with the methods of evaluating the relative effectiveness of capital investment variants (the problem of a single or a differentiated effectiveness normative for all branches), of designing, producing, and operating new equipment, standardizing output and evaluating its quality, and with the solution of the regional problems of siting production. However, most of the development work of this kind is grouped around the tasks of measuring the results of the economic activity of objects of a single level of the organizational-managerial structure against one another. Of no less importance, in our view, is a study of the "vertical," that is, that which relates to different levels of management, and to the additivity of economic indicators. If on the "horizontal" this problem is primarily a task of adducing the entire diversity of technological methods to a single economic "denominator," and, consequently, to ranking them by the characteristic of economic effectiveness, additivity on the "vertical" is a necessary precondition for the aggregation and disaggregation of economic information when decisions are made on different levels of management.

But when the economic indicators of individual enterprises are united into branch indicators, into national economic ones it is necessary, obviously, to adhere to the same principles as in comparisons within a single level, that is, economic commensurability. Only in this case is the possibility created for a movement from a detailed nomenclature to an economic aggregate and back without violating the internal logic of the organization of the information. connections in the system.

It is a special characteristic of the aggregative plan that it defines only the most important directions of the development of economic objects, while they, in their turn, have to determine in what way the assignments which have been given to them can be realized in a more concrete products list of products. It could turn out that there exist a large number of local plans in a concrete products list which satisfy the indicators of the aggregated plan. In that case the necessity arises with every local object of selecting from this large number the kind of plan which ensures a balance between the production of output in a detailed products list and its construction by other economic objects. The choice is made on the basis of direct, horizontal relations between economic cells, which is one of the most important objective conditions for the functioning of the socialist economy.

The kind of variant of direct relations has to be selected with which the process of the functioning of the economy as a whole occurs most efficiently. Consequently, the principle of aggregation has the task not only of ensuring a single base for the measurement of physical indicators against one another

(this can be done, in particular, with the help of constant prices), but also of creating the conditions under which the local interests of economic elements correspond to the goals of the development of production.

The generalized indicators of the plan have to be constructed on the basis of measurers which make it possible to compare the economic expenditures for the production of output and the effect which is obtained by society as a result of these expenditures with different physical structures for them. The measurers which ensure both a single aggregated approach and the coordination of economic interests are, as is confirmed by experience and by numerous studies in the field of SOFE, prices for production resources and final products and the system of economic normatives. The latter include above all normatives of payments for natural, labor, and production resources, interest for credit, and others. By making use of them it is possible to organize both vertical (centralized planning) and horizontal relations in a socialist economy. It follows from this that the objective conditions for ensuring the planned nature of the functioning of the socialist economy is a dual reflection of all economic interconnections both in physical and in monetary form. The fetishization of any one of them inevitably leads to serious losses.

At the present time there are instances of a lack of balance between the systems of the physical and value indicators of the plans. They manifest themselves above all in a scarcity of certain means of production and consumer goods, a surplus of the monetary mass (both in the form of cash and of cashless money), and so forth. This leads in certain cases to a decrease in the stimuli to labor, an invalid increase in the amount of expenditures compared with the final results of the work of enterprises and associations, and other negative phenomena. "That which we produce," the General Secretary of the CPSU Central Committee Comrade Yu. V. Andropov observed at a meeting with Moscow machine tool builders, "frequently costs us too much. There are substantial overexpenditures of materials and financial resources, and labor expenditures are excessive" [PRAVDA, 1 February 1983]. One of the most important reasons for this state of affairs is the poor coordination between the physical and monetary aspects of the plan which results from shortcomings in the planning methods now being used and which, in essence, leads to a decreased role for the centalized planning of the economy, and a limitation on the possibilities of economic objects to orient themselves toward economic efficiency indicators. "The formation of a disproportion between the growth of production and the growth of the population's monetary income" is a kind of "final" result of this. [Ibid.]

Thus, the methods of planning which are oriented primarily toward physical volume indicators no longer correspond to the contemporary level of the development of the productive forces, and attempts to improve these methods exclusively on the basis of increasing the number of these indicators will scarcely lead to success. What is necessary is a qualitative leap in expanding the sphere of the planning activity of socialist society by means of including in it a planned system of economic normatives. It is precisely in this direction that the system of economic management is developing in our country, the next stage of whose improvement was mapped out by the 12 July 1979 Decree of the CPSU Central Committee and

USSR Council of Ministers. The principles formulated in it for the further development of democratic centralism in management, for increasing the efficiency of all of the elements of the leadership of the economy, and for expanding the creative initiative of the workers require that the physical and value parameters of the plans be worked out in an organic unity and lead to the coordination of local plans with the central one, on the one hand, and amongst themselves, on the other. This means, in particular, a correspondence between the plans for the production and use of output in a detailed products list which is achieved by means of direct contracts and a system of economic indicators which stimulate the efficient development of economic objects. Consequently, both the centralized plan and the system of economic indicators are mutually supplementary ways of ensuring the planned nature of the development of our socialist economy as a single economic complex. Methods of management which are based on the principle of material interests are as internally characteristic of the planned socialist economic system as is immediate directive management.

The interconnection between the effectiveness of the planned management of the economy and the degree of the participation in this process of all planning and economic workers, and also directly of production collectives, can also be revealed through the concept of the planned horizon of the economic element. The general state planning agencies have the broadest economic and socio-economic horizon. Concentrated in their hands is information about inter-branch proportions, the tendencies of scientific and technical, social, and economic development, the possibilities for expanding foreign trade relations, and so forth. All of this makes it possible for the central planning agencies to work out the strategic directions of the development of the economy, long-term capital investment programs, changes in the structure of social production, and long-term economic normatives.

It is obvious that the range of questions which are dealt with on lower levels--ministries, departments, main administrations and associations, and at enterprises--has to be a different one. All of these levels are directly engaged in state planning activity within the framework of their competence. The division of labor is just as objectively necessary in the field of management as it is in modern production. The distribution of functions among planning organizations, and the granting to them of the possibility to display wide initiative not only does not contradict the principles of centralized planning, but, on the contrary, helps to increase its effectiveness and flexibility. That kind of division of rights and responsibilities between management levels can be regarded as optimal under which the conditions for making economic decisions correspond to the scope of the competence of the managerial element. When the potential resources of one or another level of management are not fully utilized, this leads to inertia and to a prolongation of the time involved in decision making. At the same time, if the rights with which such an element is endowed surpass its objective capabilities in the field of analyzing and evaluating its concrete situation and the consequences of decisions, this introduces disorganization into the planning system and disorients lower sectors. Thus, the impossibility of a detailed analysis of the development prospects of each individual production, and a lack of information on the rapidly changing needs of enterprises and related branches often leads to frequent reviews of planning

assignments (sometimes several times a year), and, moreover, without a corresponding change in material, labor, and financial resources. In its turn, the practice of planning from an attained level which has been preserved frequently engenders an unhealthy return reaction from certain enterprises--a rejection of intense plans, the closing off of internal production reserves, and so forth.

In the decisions of the party and government a broad program has been mapped out for eliminating the above shortcomings, and for a further improvement of the principles of the planned direction of the economy. A large amount of attention is being devoted to the solution of the problems of a correct distribution of rights and responsibilities in the process of the functioning of economic objects. "Recently," the General Secretary of the CPSU Central Committee Comrade Yu. V. Andropov stated in his speech at the November (1982) Plenum of the CPSU Central Committee, "quite a lot has been said about the fact that it is necessary to expand the independence of associations and enterprises, and of kolkhozes and sovkhozes. I think that the time has come to take a practical approach to the solution of this problem. . . . An expansion of independence has to be combined in all cases with increased responsibility, and with a concern for general public interests." ["Materials of a Plenum of the CPSU Central Committee. 22 November 1982," Moscow, Politizdat, 1982, p 9]

The distinctive characteristics of the process of the planned direction of the development of our socialist economy and the directions of its continuous improvement have found a reflection in the basic ideas of the SOFE about planning.

An increased role for collectives and individual workers in the management of the economy is an important factor in increasing the efficiency of social production. However, a person is not a simple mechanical executor of the prescriptions of superior managerial agencies. His behavior and production depends essentially upon how well "tuned" the entire managerial mechanism is to take account of personal interests which are immanently characteristic of the individual, and upon how closely coordinated they are with public interests. With a correct solution of the problem of a clear consideration of the key role of the individual and of the collective as a goal and not only a resource factor of the functioning of the economy, and with the development of a scientifically substantiated system of economic levers and stimuli, the interested attitude of workers toward labor and their creative activeness become a powerful internal source for the development of socialist society.

Thus, the basic direction of theoretical studies in the field of SOFE at the present time is the creation on the basis of real socio-economic conditions of a single scheme for the management of our socialist economy which organically combines centralized planning and the independence of economic objects, and directive and economic methods of management with a coordination of the physical and value aspects of management, and of the methods of stimulation and responsibility.

The decisions of the 26th CPSU Congress set the task of improving the forms of cost accounting relations and of mutual economic interests and responsibility for the fulfillment of planning assignments and contract commitments. In order

to accomplish it, it is becoming exceptionally important under present conditions to develop practically realizable but sufficiently strict methods of coordinating centralized planning assignments and the cost accounting independence of lower elements. This concerns first of all a determination on the macro-level of the magnitudes of the basic economic normatives which serve as the basis for the planned formation of the prices of concrete products in a detailed products list and for the selection of optimal technical and economic decisions by cost accounting associations and enterprises. Consequently, it is essential to have scientifically substantiated methods of finding the quantitative characteristics of the most important value parameters and of their disaggregation along the vertical of the hierarchical system of the management of the economy. The aggregate of the procedures for evaluating the economic effectiveness of diverse economic measures has to be formulated on the basis of these parameters.

A number of methods documents have now been created which have to do with an evaluation of economic effectiveness in the various spheres of social production; however, the methods which are proposed in them are frequently so contradictory that it is possible with the help of any one of them to "substantiate" the effectiveness of any measures whose introduction is regarded as expedient for various extra-economic considerations. The fact that the values of the economic normatives which are adopted in them are assigned a priori and are in no way connected with the economic plan is another fundamental defect of the existing methods.

The systematic nature of an approach to the solution of the aggregate of the problems of the planned direction of the economy which follows from the propositions of the SOFE requires the development of uniform methodological principles for determining economic planning normatives and for forming the very procedures of evaluating the economic effectiveness of measures (such as the directions of the realization of overall inter-branch and territorial production programs, variants of the development and siting of production in the branches of the economy, capital construction variants, and so forth), and the formulation on this basis of the corresponding methods recommendations.

Thus, the concept of planning from the point of view of the SOFE has to be interpreted more broadly than is customary. The planning activities of socialist society embrace all of the aspects of its functioning. An increased role for planning has to be regarded as a lawful (as the level of maturity of the socialist economy rises) process of an ever increasing coverage of the various aspects of economic life by the sphere of the planning activities of socialist society at all levels with an optimal distribution of planning and managerial functions among all of the sectors of expanded socialist reproduction. In this sense, planning is increasingly becoming a public matter..

COPYRIGHT: Izdatel'stvo "Nauka", "Ekonomika i matematicheskiye metody", 1983

2959
CSO: 1820/120

PRODUCTION CONCENTRATION IN INDUSTRY, AGRICULTURE VIEWED

Moscow EKONOMICHESKIYE NAUKI in Russian No 4, Apr 83 pp 43-50

[Article by R. Polyakov, docent, candidate of economic sciences (Leningrad): "The Concentration of Socialist Production"]

[Text] In the economic literature the concentration of production is interpreted as a process of the concentration of the means of production, labor power, and output production at increasingly large enterprises.[1] However, economists are more and more often coming to the conclusion that it is incorrect to identify production concentration with the enlargement of enterprises, and that in characterizing it it is necessary to take as the basis not the dimensions of the latter, but the dimensions of concrete production processes, the dimensions of homogeneous productions, and so forth.[2] However, there is as yet no unambiguous interpretation of the quality specificity, criterion of optimality, and of the mechanism for increasing production concentration under the conditions of developed socialism.

As is known, K. Marx distinguishes in general production its individual species, types, and particular elements. They, of course, reflect a developed system of the social division of labor and of social needs. Insofar as the satisfaction of each concrete social need necessitates a concrete use value (and, consequently, "a definite species of production activity" which is marked "by its own goal, character of operations, subject, means, and result"[3]) there cannot be an abstract concentration of production, just as there is no abstract production or abstract equipment. The concentration of production always has its own qualitative and quantitative specificity. As for an enterprise, it can be represented by any number of productions which are different in their profile and volumes.

The question of the optimal size of a production and of enterprises is frequently posed and resolved in connection with the problem of production concentration. The approach to the solution of this question must, it seems to us, be based upon the fact that a production is optimal if its dimensions are adequate to the capabilities of contemporary (advanced) equipment and technology and to a corresponding organization of labor and production. But the conditions for the optimality of the size of an enterprise are broader: here the task is to determine how many and which concretely optimal productions it is economically advisable to combine in a single enterprise-complex in the concrete conditions

of its location. First of all, only an enterprise which includes optimal productions may be optimal. Secondly, in determining an efficient set of productions it is necessary to keep the following factors in mind: their technological compatability; their managability, and the advantage of common engineering facilities; the availability of suppliers and consumers; the availability of labor power; the development of transportation, communications, and the fuel and energy base; environmental influences; and a number of other conditions. Only if they are taken into consideration will an enterprise be an efficient element in the material production and socio-economic structure of a given economic region and of the economic complex as a whole.

Thus, enterprises may be large, and productions may be small and duplicated at every enterprise in dimensions which do not permit the efficient use of modern equipment, technology, and labor and production organization. If modern forging and pressing equipment is designed for the production of 300,000 forgings and pressings a year, and an overall giant plant requires (for its self-provisioning) only 30,000 such products, then this equipment will have a work load of 10 percent and will bring the plant and society only losses. Unfortunately, in economic theory and practice the socialization of production (and its concentration) is substituted for by the socialization of the factors and results of production (and their concentration), which causes great damage to the economy.[4]

The deeper the differentiation of social production goes, especially in the era of large machine production, the narrower the limits within which the efficiency of small and large production can be compared become. It is obvious that the efficiency of small and large production can only be compared in application to homogeneous productions.

Under socialism what is most important is use value and the direct social relationship, and not exchange value and a relationship mediated by it. For this reason, the problem of production concentration should not be depersonalized (by solving it on the basis of some non-existant abstract enterprise), but posed and solved concretely: by adopting equipment which is adequate to developed socialism; by determining its optimal production of a concrete product; by taking the productivity of concrete labor as the resultant indicator; and so forth. Only with the homogeneity and comparability of the factors and results of production are a rational basis and value planning indicators obtained.

Unfortunately, our industrial and agricultural statistics is still operating with the sizes of enterprises, and not the sizes of concrete productions. For example, in 1975 industrial enterprises with an average annual value of industrial production fixed capital of more than 10 million rubles produced 57.6 percent of gross industrial output, but they accounted for almost the same proportion, namely, 54.7 percent of industrial production personnel, and an even larger proportion--76.8 percent--of the average annual value of industrial production fixed capital, and 88 percent of the electric energy consumed. At the same time, enterprises with an average annual value of industrial capital of from 3.1 to 10 million rubles produced 21.6 percent of gross industrial output, but they accounted for 20.3 percent of industrial production personnel,

18.5 percent of the average annual value of industrial production fixed capital, and only 7.4 percent of the electric energy consumed.[5] It turns out that the second group of enterprises provided a more efficient use of resources. I believe that this illustration confirms that the grouping of enterprises by their overall sizes without regard to the concrete branch and the production structure of the enterprises, or to the influence of prices and so forth yields very little that is useful for theory and practice.

Proceeding from the above, in solving the problems of production concentration a large role is played by an analysis of the structure of production. International comparisons can be of definite use here.

It is known that machine building determines not only scientific and technological progress in an economy, but also the branch structure of social production; that is, the level of production concentration and centralization in all of the other branches of the economy. Let us compare the structure of production in the machine building of the USSR and the United States when it was based approximately on the same level of equipment progress (machinery system) and when the amount of the branch's output in the USSR (1970) and in the United States (1958-1960) was approximately comparable. In our machine building out of every 100 enterprises the following numbers produce the following items for their own needs: gear wheels--99, forgings--84, stampings--76, cast iron--71, nonferrous castings--56, mounting hardware--56, and so forth. In American machine building (excluding the energy and transportation machine building branches which do not have their own forging and casting bases), of 26,850 enterprises, the following numbers had shops and sectors: forging and pressing--261 (that is, 0.9 percent of the total number), casting--383 (1.44 percent), mounting hardware--995 (3.7 percent), thermal--1,323 (4.9 percent), modelling--1,262 (4.7 percent), billet--2,241 (8.3 percent), machinery--7,636 (28.6 percent), metal structures--2,147 (8 percent), tool--3,100 (11 percent), and so forth.[6] Moreover, 52 percent of the total plants which belonged to 500 of the largest American corporations were specialized in the production solely of a single product, or in the performance of a single production operation.[7] Consequently, more than one-half of the enterprises were "single-product enterprises," represented by a single concrete production which carried out the mass production of homogeneous products for dozens of other plants.

Our enterprises, as a rule, are represented by dozens of diverse shops and sectors which are enclosed in a single production cycle. In this way, not only every plant has a full set of the basic and auxiliary shops and sectors, but frequently an individual shop or sector produces the widest products list of component products. Consequently, each product which is homogeneous in its function is produced by hundreds of shops and sectors. As is shown by practice, this arrangement involves an inevitable orientation by enterprises toward universal low-productivity equipment, a low work load coefficient for it in time and capacity, a highly wasteful metal working technology, increased product costs, inadequate product quality from the point of view of contemporary requirements, and a deunification of billets, parts, units, and machinery and equipment which have the very same function. Since machine building enterprises are oriented toward "self-provisioning," enterprises of the non-machine building

branches are compelled to engage in the production of parts and spare parts and in equipment repairs.

At the present time the machine building ministries perform at best two-thirds of branch production, and a substantial amount of their profiled output is produced at the enterprises of other ministries: as a rule, it proves to be several times more expensive and of poorer quality. Thus, 22 plants of the Ministry of Heavy Machine Building produce only 17 percent of the hoisting and transportation equipment, while the remaining 83 percent of this output is produced by 400 plants from 35 ministries and departments. Within a branch the same equipment is frequently produced by 10-15 plants. Basically, every plant continues to produce billets, parts, and units "for itself." As was the case 10 years ago, the centralized production of billets comprises only three percent of their total production, with, in particular, castings coming to 4.5 percent and forgings and stampings to 2-3 percent.[8] For this reason, less than one-half of the country's metal working equipment is concentrated at the enterprises of machine building ministries, while 45 percent of the metal working equipment and 5-6 million workers[9] are occupied in the machinery and machinery repair shops and subdivisions of non-machine building enterprises, although the equipment work load and labor productivity here is several times lower than in machine building. Only through the specialization of enterprises is it possible to provide a "field of application" for modern equipment and a further differentiation of the branches of machine building and of the branches which consume its output, to accelerate the rates of scientific and technological progress, and so forth.

Production concentration differs from the mechanical enlargement of farms or industrial enterprises precisely as an instance of integration; that is, an element-by-element composition of their production structures and enlargement of concrete production processes to optimal dimensions which permit the most efficient use of advanced equipment and technology and the corresponding labor and production organization. There is no instance of integration, for example, for those production associations which represent an arithmetic total of overall enterprises, and not an organic integral unity of their production structures. Of course, it is not accidental that the efficiency of production and scientific production associations is still low: in 1970, 1975, and 1980 there were 608, 2,314, and 4,083 associations in industry, respectively; they accounted during those years for 6.7, 24.4, and 48.2 percent of sold output and 6.2, 28.8, and 50.1 percent of industrial production personnel.[10] It seems to us that the necessity has arisen for a "association of associations," and also for the participation of enterprises not in one, but in many associations for different parameters of activity. But the accomplishment of these tasks requires the defining and organization in practice of optimal productions (as the initial rational elements of the entire structure of social production), and a fundamentally consistent orientation toward specialized component enterprises.

It is more simple, cheaper, and faster to plan, staff, build, master, and reconstruct a specialized enterprise. With a developed system of transportation, energy supplies, and communications specialized machine building branch plants which, thanks to their overall mechanization and automation, do not require

a large number of workers can easily be located in small populated points, thereby ensuring an even siting of industry and population over the country's territory. Overall giant enterprises, on the other hand, which are designed for the optimal dimensions of the hundreds of concrete special productions which go into them are inevitably subject to obsolescence, since planning them, furnishing them with complete equipment, building, mastering, and reconstructing them is dragged out over a number of years. Nor can we fail to consider the fact that the construction of such enterprises involves the accelerated growth of cities which requires increasingly large amounts of capital investments, unjustifiably increases the exodus of labor power from agriculture, worsens the country's labor resources balance, and gives rise to a number of other difficult problems. It is not of exceptionally great importance to implement, in particular, those decisions of the 26th CPSU Congress which map out a further specialization of machine building production, and the creation of new and the development of operating specialized enterprises and large shops which manufacture billets, parts, and units of branch and inter-branch purpose.[11]

There are very important problems of production concentration in our agriculture. On the basis of a most detailed analysis, V. I. Lenin demonstrated how inconclusive data on the size of enterprises (farms) is for a characterization of the actual level of the concentration of agricultural production.[12] In particular, it has to be remembered "how inconclusive the wholesale data of agricultural statistics about farm areas is and with what caution it should be used. Indeed, in industrial statistics we . . . can easily distinguish individual productions. Agricultural statistics very rarely satisfies this necessary condition of conclusive proof."[13] Let us note that V. I. Lenin considered the possibility of easily distinguishing individual productions to be a necessary conditions for the conclusiveness of statistical data, for "data on farm area alone is insufficient for making judgments on the size of production."[14] V. I. Lenin takes data "which makes it possible to look, so to speak, inside of a farm, into its equipment and organization"[15] by means of grouping farms not according to a single characteristic (area size), but according to several characteristics (quantity of machinery and livestock, area sowed to special crops, and so forth).[16] Here again the necessity is emphasized of distinguishing areas sown to concrete crops, and not limiting oneself to production in general, for "the main line of the development of capitalist agriculture consists precisely in the fact that the small farm, while remaining small with regard to area, becomes a large one with regard to its amount of production, the development of livestock breeding, the amount of fertilizer, the development of the application of machinery, and so forth."[17]

Let us turn to our agriculture. During the 7th and 8th Five-Year Plans animal husbandry began to receive equipment designed for 300-500 cows, 500-1,000 and more swine, and 20,000 and more chickens. The kolkhozes were enlarged, which corresponded to the theory identifying production with the enterprise. However, production remained small-scale because the animal husbandry building space which was scattered in various populated points remained small. On the average, a barn on a kolkhoz held 35 cows, 193 swine, and 666 chickens,[18] which is approximately 10 times less than the capacity of the equipment. Incidentally, at the beginning of the 9th Five-Year Plan there were 470,000 rural populated

points in the country (on one-half of which up to 50 people lived) and there were 613,000 animal husbandry sections (12-13 sections per kolkhoz and sovkhoz), of which only 45,000 of the genuinely large sections had overall mechanization. During the 9th and 10th Five-Year Plans large animal husbandry complexes were constructed, although the concentration of production in this branch was not accompanied by a corresponding reorganization of cropping. According to the data at the beginning of the current 5-year plan, there were more than 200,000 animal husbandry sections and complexes with 600,000 barns on the kolkhozes and sovkhozes.[19] In order to shift the whole of animal husbandry onto an industrial basis without running too far ahead and without "giganto-mania" in the creation of complexes, it is necessary to intensify cropping at outstripping rates.

The practice of recent decades proves that the formation of a machinery system for agriculture and the optimization of the sizes of its concrete productions is a single process which is in need of practical verification. "A machinery system requires first the experimental use of various machines, and examples of the joint use of many machines"[20] in application to the different branches and soil and climatic conditions.

First of all, this system has to be "developed" in practice as a set of capacity-multipliable special machines (or groups of individual machines), implements, and so forth which make it possible to mechanize all of the stages of a given production process. Then, a definition is arrived at of the basic cooperation of the workers (link) capable of putting this system of machinery into action in a way adequate to its production potentialities, and the necessary field of application for these "factors of production" is defined. Let us assume that in a given zone a theoretical and experimental statistical analysis of the work of links of "different calibers" has revealed this magnitude to be 100 hectares. If the average yield (in an oblast or rayon) over a number of years comes to 200 quintals of potatoes per hectare, then a single optimal production process will produce on the average 2,000 tons of potatoes. The practical introduction of such productions will place links in equal technical and economic conditions, create the conditions for creative socialist competition and for the introduction of advanced forms of labor organization and payment, and will make it possible to perform a technical and economic substantiation of a production plan for an individual farm, rayon, or oblast. For example, if in 1985 an oblast is supposed to produce three million tons of potatoes, it will have to have 1,500 potato growing links (3 million tons: 2,000 tons). It is easy to calculate how many machinery and implement sets will be needed, and how much and what kind of melioration equipment, fertilizer, and other means of production will have to be supplied to the oblast by years in order to obtain this quantity of potatoes; and it will be easy to make up a plan for the training of mechanization specialists in order to staff the appropriate number of links by years. In the same way, the optimal productions in other branches of agriculture need to be determined and by means of their cooperation in combination a rational structure of sown areas has to be made up.

It is very important to emphasize that a consistent intensification of agriculture is incompatible with a multi-branch (and this also means micro-branch) agriculture to which extensive multi-field crop rotation is adequate. Intensification requires production specialization and concentration, and a shift on this basis from an extensive multi-field to an intensive system of agriculture, with, of course, a rational alternation of crops in crop rotation. In this connection, it is necessary to carry out a territorial division of labor more consistently, and to specialize the agriculture of zones, rayons, and individual farms more precisely. In addition, it is not to the size of the farms taken as "the basis" that a rational structure of farming has to be adapted, but, on the contrary, the efficient dimensions of land use on the farms has to be determined by means of an optimization of the dimensions of concrete production processes and their rational cooperation and combination in the most effective crop rotations. Only in this way is it possible to bring the structure of agriculture into correspondence with the contemporary stage of the development of equipment, technology, and labor and production organization, and to thereby ensure the necessary conditions for its consistent intensification.

In animal husbandry also the concrete productions have to be optimized. It is not "unique" sections that are needed for the transformation of this branch, but standard ones which have been tested in a number of zones and which have become an object of flow line production in machine building, in the construction materials industry, and so forth.

For example, on a dairy farm it is necessary to have barns and standard stalls for 50, 75, and 100 cows (depending upon the forms of maintenance), and to create sections with a set of standard equipment from the standard box equipment in application to concrete conditions. The kind of section that is needed in one or another farm is a question that should be decided in relation to the development of the feed base, the availability of labor power, the conditions for marketing output, the development of transportation and communications, the prospects for specialization, and other factors.

An optimization of the dimensions of the basic productions will make it possible to form a rational and uniform cropping and animal husbandry structure; to create optimal raw materials zones for standard (optimal) enterprises of the processing industry; to scientifically substantiate the large-scale agro-industrial combination of production on the basis of a machinery system; to map out the future process of the siting of the rural population and of agricultural and industrial objects with the calculation that the most rational infrastructure basis on the scale of large economic regions, oblasts, and republics will be able to be fitted to this social and production structure; to connect rural populated points with a network of high quality roads, bring in an optimal system of energy supplies, develop all types of communications, water supplies, gasification, and so forth; and to provide for the rational siting of cultural and domestic facilities which are in accord with the requirements of the time.

It is necessary to make special mention of the fact that the concentration of the rural population is not a goal in itself. For without regard to the siting of population, the development of infrastructure factors is an objective

necessity for raising the level of the socialization of agricultural production, for transforming its backward structure, and for the agro-industrial combination of production. If this is true, then in solving the problem of population siting it is necessary first of all to adopt an orientation aimed at increasing relative density on the basis of mobility. The mechanical "settling" of rural inhabitants could produce irreparable damage: gigantic investments are required for the construction of a new housing fund which is not yet adapted to rural conditions; the worker is removed from the field of his activities by many kilometers of poor roads and this reduces production efficiency and leads to an unwarranted exodus of the rural population and, at the same time, to an excessive piling up of population in large cities. The development of transportation is creating the conditions for an even siting of industry in the population, and for an organic synthesis of industry and agriculture; it is providing a "common sidewalk" for workers and peasants, bringing the former closer to nature, and the latter to the treasures of science and art which for centuries have been piled up in a few centers;[21] and it is helping to overcome the social and economic differences between workers and peasants and between town and country.

During the era of machinery systems and, especially, of automated machinery systems the differentiation and integration of social production (its socialization) reaches the kind of level in which it is not enterprises or farms which are the basic structure-forming element of social production, but concrete productions based in each branch on standard equipment and technology, optimized in their dimensions, producing large amounts of technologically homogeneous products (operations), and engaged in efficient cooperation and combination territorially with the productions of other branches. If society's need for a given concrete product and the capacity of the optimal production process which produces it are known, it is easy to determine the necessary number of optimal productions in the given branch and its territorial location; the branch's need for full sets of industrial means of production and the possibility of producing them in the branches of large-scale industry; the need of each branch for concrete workers, and so forth. A shift in the thinking of theoreticians, statisticians, planners, and economic executives from operating with abstract enterprises to operating with concrete (optimal) productions will be of exceptionally great importance for economic science.

Already today an optimization (and standardization) of concrete productions would make it possible to appreciably curtail the universal duplication of the production of the same output by dozens and hundreds of thousands of productions scattered in the most diverse branches, especially in machine building, woodworking, in the production of construction materials, and so forth, and would make it possible to efficiently group equipment and thereby create a practical soil for the setting up of a machinery system, and so forth. The practical introduction of single product enterprises in the production of intermediate products will ensure a high level of efficiency for the system of planned management, for the production structure would be represented by the most efficient elements: enterprise-productions.

In order to bring about a planned acceleration of the process of production socialization it is necessary to make fuller use of the reserves for developing democratic centralism in our system of management.

As the experience of recent decades shows, the system of planned management can only be a territorial-branch one. The branch and territory are objectively determined elements of the social division of labor, and, therefore, in planning and management it is necessary to dialectically realize the objective functions of branches and territories. A uniform scientific and technical policy can only be carried out through a branch which is the attribute of large machine industry and represents an aggregate of productions which are homogeneous in equipment and technology. An overall character in the development of different branches can only be achieved through territorial elements and their economic agencies. Under present conditions every ministry (which sometimes does not embrace even two-thirds of its branch as a result of the overall character of enterprises) frequently looks upon the entire territory of the country as its "bureaucratic empire" and, for this reason, production is sited irrationally, an artificial shortage of labor power is created, production capacities are used poorly, irrational cross-hauls occur in transportation, natural resources are not always used judiciously, and a harmonious solution of the entire complex of economic and social problems is not ensured.

A strengthening of centralism requires an improvement of the unified economic plans which have the force of state law. They have to be worked out in territorial and branch breakdowns with the full participation and equal responsibility of territorial and branch economic agencies. An approved plan has to give ministries the dynamics of society's needs for the branch's output and the territorial location of the latter by years. In addition, it would seem that it is necessary to allocate capital investments to ministries only for the development of their profile, branch productions and enterprises in accordance with the dynamics of the need for their output, otherwise the need for capital investments proves to be boundless, for capital is scattered over numberless non-profile and non-optimal objects. Territorial economic agencies have to receive from the plan the dynamics of the branch structure and the development of the production and social infrastructures on their subordinate territory. The centralized financing of the development of the infrastructure (including the system of material and technical supply) should be carried out through the territorial economic agencies, with the functions of "arbitrator" in controversial territorial and branch questions given to Gosplan USSR.

On the other hand, the mobilization of the limitless possibilities of developed socialism require the strengthening of democracy in management, and the cultivation in every Soviet person of activeness, initiative, and responsibility for his work. A large role has to be played here by the possibility for participation by everyone in discussing the drafts of our plans; moreover, from top to bottom so that every worker and peasant is able to compare his work, and the work of his team, enterprise, rayon, oblast, and so forth with the successes of neighbors, and is able to adopt the best from others and share his own advanced practical experience. In his speech at the November (1982) Plenum of the CPSU Central Committee Comrade Yu. V. Andropov, speaking about a zealous

attitude toward the people's property, emphasized that "this task can only be accomplished with the participation of every worker, every toiler of our enterprises and our kolkhozes and sovkhozes. It has to be seen to it that they perceive this task as their own."[22] The participation by every worker in the development and realization of economic plans as if it was "his own affair" is a very important factor in our future successes, particularly in the efficient concentration of socialist production.

FOOTNOTES

1. "The Political Economy of Socialism," edited by Professor A. F. Rumyantsev, Moscow, 1971, p 274; "Political Economy. A Course of Lectures. Part II," edited by F. V. Borovik, Minsk, 1971, p 127; "The Economics, Organization, and Planning of Industrial Production," Moscow, 1972, p 96; "Political Economy. Volume II. Socialism. The First Phase of the Communist Method of Production," textbook, Moscow, 1979, pp 226-227; "Political Economy. Dictionary," edited by Professor M. I. Volkov and others, Moscow, 1979, p 167.

2. "Problems of the Optimal Size of Enterprises in USSR Industry," Moscow, 1968, pp 58, 424; V. S. Byalkovskaya and G. A. Bryanskiy, "Economic Problems of the Development of Inter-Branch Productions," Moscow, 1969, p 7; N. A. Moiseyenko, "Essays in the Theory of Individual Reproduction," Moscow, 1971, pp 58-63; R. Leshchiner, "On the Optimal Sizes of Enterprises in Industry," EKONOMICHESKIYE NAUKI, No 8, 1972, p 62; M. V. Gazaliyev and T. P. Nikonova, "The Planning and Economic Stimulation of the Specialization of Industrial Production," Moscow, 1974, p 132; and others.

3. K. Marx and F. Engels, "Works," Second Edition, Vol 23, p 50.

4. For more details see "The Socialization of Production in a Developed Socialist Society." Scholarly transactions of the Departments of Social Sciences of Leningrad, Leningrad, 1979, Issue XX, pp 22-41.

5. "The USSR Economy in Sixty Years," Moscow, 1977, p 193.

6. D. M. Zabelin, "The Specialization and Concentration of Production Under the Conditions of the Economic Reform," Moscow, 1970, pp 19, 31; N. S. Sachko, "The Concentration of Production in Industry," Moscow, 1968, p 106.

7. M. S. Dragilev and N. I. Mokhov, "The Leninist Analysis of Monopoly Capitalism and the Present Day," Moscow, 1970, p 48.

8. S. Kheynman, "The Tasks of the Development of Machine Building," VOPROSY EKONOMIKI, No 8, 1981, pp 30-31.

9. Ibid., p 26.

10. "The USSR Economy in 1980," Moscow, 1981, p 121.

11. "Materials of the 26th CPSU Congress," Moscow, 1981, p 154.

12. V. I. Lenin, "Complete Works," Vol 4, pp 124, 126, 127.

13. Ibid., p 126.

14. Ibid., Vol 5, p 19.

15. Ibid., p 204.

16. Ibid., p 213.

17. Ibid., Vol 27, p 192.

18. M. Lemeshev, "The Inter-Branch Relations of Agriculture," Moscow, 1968, p 110.

19. EKONOMICHESKAYA GAZETA, No 45, 1981, p 2.

20. V. I. Lenin, "Complete Works," Vol 5, p 140.

21. Ibid., p 151.

22. "Materials of the 22 Nobemver 1982 Plenum of the CPSU Central Committee," Moscow, 1982, p 11.

COPYRIGHT: Izdatel'stvo "Vysshaya shkola", "Ekonomicheskiye nauki", 1983

2959
CSO: 1820/137

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

FUTURE ECONOMISTS REQUIRE BROADER BACKGROUND

PM081046 Moscow PRAVDA in Russian 28 Jul 83 First Edition p 3

[Article by Po Bunich, head of the department of the economic mechanism of the management of the socialist economy at the Moscow S. Ordzhonikidze Management Institute, under the rubric "Problems and Opinions": "The Kind of Economists the Economy Needs"]

[Text] Life today is making great demands on economic science. It presents it with serious tasks in finding the required practical solutions to important problems, solutions which accord with the principles and conditions of developed socialism. These problems include the choice of reliable ways to enhance production efficiency and output quality, as well as a scientific price fixing methodology, and many more. One way to improve work in this sphere is to improve the training of economists--both those engaged in practical work and the scientists.

The prime question is: in which spheres of the economy will the country's need for economists be especially felt in the next few years? At the CPSU Central Committee June (1983) Plenum spheres whose development will lead to a genuine revolution in our national economy were named. They include production automation, the very widespread use of computers and industrial robots, the introduction of flexible technology, the utilization of the latest nuclear reactors, the production of materials with predetermined properties, the development of biotechnology, and the application of waste-free and energy-saving technologies.

Meanwhile there are clearly not enough economists who have mastered, for instance, the methods of calculating nuclear power industry efficiency. The system of training computer programmers is oriented toward obsolete computer designs which do not envisage delegating the programming to the computers themselves and replace one routine operation by another. The total number of economists being trained does not take into account the prospects opened up by the mass introduction of automated control systems.

The industry is experiencing a real dearth of qualified specialists in the sphere of norm fixing. This is holding up the intensification of production and the introduction of the team contract method--one of the most important factors in

enhancing labor productivity. The question of expanding the training of specialists capable of studying and disseminating the socialist countries' leading economic management experience is also worthy of attention. The same applies to the training of economists for the modern agroindustrial complex.

The quality of the specialist depends on the quality of his training. That is a truism. However, many of the textbooks, if one looks at them, or lectures, if one listens to them, contain more about how various operations should be carried out, rather than explaining why an operation should be carried out in that way and no other. And even more rarely is it pointed out that a given operation should not be used at all, that it reflects an outdated and erroneous logic of management, that another approach (or approaches) is being debated, whose pros and cons are such and such. The rule has become ingrained that the more educational literature adopts a questioning approach, the less right it has to be classified as a textbook. The discussion of problems is tolerated at best in a textbook. This reinforces the tendency for textbooks to become fundamental absolutes of the past instead of throwing light on the future in which the VUZ graduate will work.

The need to encourage the creative principle also comes to the fore in connection with the course of developing the enterprises' independence steered by the party and the state. This, in economic terms, presents, so to speak, a challenge to individual initiative and the spirit of socialist enterprise, [eto ekonomicheski vyzyvayet, tak skazat, "na sebya," initsiativu, sotsialisticheskuyu predpriimchivost], and influences the formation of the employees' psychological attitudes.

Therefore, it is necessary today to teach the future economist to act creatively and with a statewide approach. Is it at all possible to teach the new type of economic thinking, or should one leave it to intuition and regard it as an art accessible only to the chosen few--excellent managers "by nature?" I believe that "natural inclination," without having assimilated the concept of the national economy's development and without knowledge of the system of political and economic laws, is worthless even for the "geniuses" of management and all the more so for the "nongeniuses" without whom the wheel of management could not turn. Independence, initiative, and a spirit of enterprise can and must be "coached." Study programs must provide the corresponding opportunities for this.

The time is past when it was possible to rely on, so to speak, "tunnel vision" specialists. Our age with its revolutionary avalanche of discoveries and changes needs people with a rich store of scientific knowledge to serve the economy. In other words, in order to be a good economist one must not only be a good economist, but also a philosopher, a sociologist, a psychologist, and so forth. Shortsighted penny-pinching in imparting knowledge is fraught with immeasurably greater future expenses which wipe out the efficiency of higher economic education.

It is, of course, easier to study "what is" rather than "what should be." The presentation of the sum total of facts is less trouble and demands less expertise than getting people used to learning to think, analyze, criticize, debate, discover, and strive for the introduction of new ways. True, the striving for innovation must not be reduced to affected terminological innovativeness, particularly in educational literature which not infrequently abounds with such words as "brainstorming" [mozgovaya ataka], "vector," "scalar," "management normal" [normal upravleniya], and so forth, while the simplest little task, described in the past as the analysis of a specific situation, is now no less than "business interplay."

It would be useful, I believe, to somewhat reduce admissions for individual professions which do not require the mass training of graduates. This would make it possible, first, to enhance the quality of tuition, and second, to select the most capable and best prepared school-leavers. As an experiment, it would be a good thing to make provision for another competition--a study competition. To this end, specific assessment norms should perhaps be introduced for all courses, setting minimum totals and the lowest possible marks in individual main subjects. And as regards the study courses themselves, it would be worthwhile to switch from vocational guidance according to professions to vocational guidance within those very professions.

VUZes must look far ahead. They must see, explain, and show. This presupposes that lecture halls are fitted with the most up-to-date teaching equipment so that the specialist entering the national economy is versed in the work methods of the present and the future, and not of the past. This applies, in particular, to such management equipment as modern computers. Their allocation to teaching institutions must obviously be on a par, as regards priority, with the equipping of front-ranking scientific establishments.

Study courses should also be more systematically structured. Thus, the students in economic VUZes study political economy when they first arrive, and philosophy only considerably later. It seems to me that these two courses should be taught simultaneously. The students will then better grasp the natural laws governing social development. After the political economy, as a rule, functional economics (planning, finance, statistics, economic analysis, and so forth) are studied, as well as a specific sector of the economy or industry. However, the tuition unfortunately does not go as far as to provide an overview of the functioning of the national economic complex. Having mastered their specific disciplines the students are left with the impression that they are separate, the national economy's internal correlations and interdependent factors having been ignored. I believe that it is necessary everywhere to introduce a course on the economic mechanism of management to round off the study of the specific branches of the economy.

There is a time for everything, as they say. A time to prepare changes in education and a time to study in the new way, a time to work in production and a time to reap the fruits. The clock has been switched on. Time lost at any stage is a resource that cannot be replaced. And that means that it is necessary to act.

CSO: 1820/152

PLANNING AND PLAN IMPLEMENTATION

REPLIES TO SUGGESTIONS FOR PLANNING IMPROVEMENTS

Moscow PRAVDA in Russian 26 Jul 83 p 3

[Article: "'The Gosplan and Competition' Following the PRAVDA Articles"; see JPRS 82648, 14 January 1983, No 1036 of this series, pp 15-22, for referent item]

[Text] Under such a heading, an article was published in PRAVDA on 2 and 3 November 1982 which concerned the need to improve planned work and to take into account more completely the advanced experience and reserves brought to light by the initiative of labor collectives in the course of socialist competition, and in which facts from practice of the Belorussian SSR Gosplan were cited.

As A. Koloshin, deputy chairman of the BSSR Gosplan, reported, the collegium of the republic's Gosplan reviewed the article and considers the problems touched upon in it to be extremely important. Work is being conducted in the republic to improve planning and to put into effect the measures stipulated in the CPSU Central Committee and USSR Council of Ministers decree of 12 June 1979, and to make broader use of programmed and special-purpose methods.

For improving the planned management of labor resources, the Belorussian Communist Party Central Committee and the BSSR Council of Ministers have intensified supervision over observance of the limits of the number of workers in associations and industrial enterprises in the republic. A number of other steps have been carried out to improve intrarepublic territorial planning. Thus, the targets for union-republic and republic ministries and departments are being approved by the BSSR Council of Ministers in an oblast cross-section. Composite plans for consumer goods production and social development are being worked out at the level of the republic, oblasts and the city of Minsk.

At the same time, certain problems of improving planning in the republic are being resolved slowly, incompletely. In particular, this concerns the calculation of reserves brought to light by competition at the planning stage, as well as improving the intensity of plans. It is well known that counterplanning is an efficient way of resolving this problem. However, the propositions in accordance with counterplans remain unstable, and the economic incentive measures stipulated in them are not attracting enterprises sufficiently to accept the more intensified targets, especially in accordance with efficiency

indicators. The republic Gosplan has introduced appropriate proposals on this score to the USSR Gosplan. At the same time, measures have been taken to improve the responsibility of BSSR Gosplan departments for the drafting and acceptance of counterplans in different sectors. In sum, the number of associations and enterprises accepting counterplans for 1983 has nearly doubled compared with last year, and output in accordance with basic indicators of social and economic development in the republic has been ensured at the level of the five-year plan targets in the plan for this year.

The significant number of adjustments to the plan and their unfavorable consequences are correctly pointed out in the article. Measures are being taken in the republic to reduce them to a minimum. Proposals have been prepared to improve the structure of management, to expand the rights of union republics and economic organs in planning matters, and to increase their independence and responsibility for the end results of work.

Measures have been drafted by the collegium and party bureau of the BSSR Gosplan in which it is planned, with the determination of specific executors and periods, to increase the responsibility of the organization's specialists for the status of planning, supervision of the fulfillment of planned targets in sectors of the national economy, and for conducting a regime of economy of material and technical and fuel and power resources and observance of state, planning and labor discipline.

The editorial staff also has received a response from the Ministry of the Electrical Equipment Industry. A. Povelichenko, chief engineer of Soyuzelektrokabel', reported that penalties have been imposed on the officials guilty of poor management of physical resources in accordance with the facts of overexpenditure of raw material at the "Gomel'kabel'" plant which were cited in the article. Soyuzelektrokabel' has charged the production association "Belarus'-kabel'" with improving work organization to economize raw material and has taken fulfillment of the measures stipulated under supervision.

8936
CSO: 1820/145

PLANNING AND PLAN IMPLEMENTATION

MATERIAL BALANCES AS INSTRUMENT OF PLANNING

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 3, Mar 83 pp 68-74

[Replies to readers' questions: "The Material Balance--An Instrument of Planning"]

> [Text] Many of the journal's readers are interested in the questions connected with the methods of working out and implementing material balances. These questions are replied to by I. A. Kalinin. He worked for a long time in the agencies of material and technical supply. In recent years he has worked as chief of the Consolidated Department of Material Balances and Distribution Plans of Gosplan USSR

[Question] What is the essence of material balances and what is their role in the development of plans for the development of the economy?

[Answer] Material balances are a highly important instrument of planning. They help in establishing the objectively necessary real material inter-branch and intra-branch proportions in the long-term and annual economic development plans of the country--the proportions between the different branches of the economy--and in establishing the correlations between the production volumes of the implements and the objects of labor. The diverse real material proportions in the economic plans are determined on the basis of the economic laws of socialism, and, above all, the law of the planned development of the economy with regard to the labor and material resources of the union republics and oblasts.

The economic strategy of our party finds its expression in the material balances.

In his report commemorating the 60th anniversary of the formation of the USSR the General Secretary of the CPSU Central Committee Comrade Yu. V. Andropov noted: "The most judicious use of the natural and labor resources and of the climatic peculiarities of every republic, and the most efficient inclusion of this potential in our all-union potential--this is what will bring the greatest benefit to each region and each nation and people, as well as to the entire state.

This is our fundamental position. In order to realize it in practice our central and local planning and economic agencies will have to do quite a bit of work."

This demand by the party has to find its concrete expression in the material balances of the country and of each union republic.

The material balances method was already in use with the composition of the first long-term plan of the State Commission for the Electrification of Russia. It was constantly perfected during the course of the preparation and realization of the first 5-year plans. The rich practical experience which has been built up here has made it possible today to create the necessary conditions for the use of an intercoordinated broad system of balances which embraces the full totality of the material and economic relations of inter-branch and national economic proportions. At the present time the system of planning and reporting balances consists of the following groups:

material balances which are worked out for a wide range of industrial and agricultural output. These material balances are directly connected with the production capacity balances which cover the basic types of industrial output and also of natural resources and which take account of the stocks of mineral raw materials, lands, water, and other resources;

labor resources and labor power balances which characterize the directions of their use in the country as a whole, in town and village, in the economic regions, in the individual branches of the economy, and in the most important specialties;

financial balances and, above all, the State Budget and the state budgets of the union republics, and the income and expenditure balances of the state, of production associations and enterprises, kolkhozes, and of the population, and credit and cash plans.

The coordination of the individual types of balances is achieved in the calculations of the balance of the USSR economy. It represents a system of analyzing economic calculations and indicators which characterize the process of socialist expanded reproduction as a whole, as well as in the branches and sectors of the economy. The calculations of the national economy balance give a full-scale characterization of the growth rates of expanded reproduction and its effectiveness, and of the basic economic proportions and social problems of the national economic plan. Its most important sections are the social product and national income balances, the summary balances for labor, and for fixed and circulating capital, and the inter-branch balance of production and of the distribution of output.

The inter-branch and intra-branch proportions are studied and determined on the basis of the industrial output balances. The balances and distribution plans which are worked out by Gosplan USSR include more than 2,000 output items. Balances and distribution plans are worked out by Gossnab USSR and the USSR ministries and departments for several thousand output items.

The products list of the most important types of industrial output which are distributed by Gosplan USSR includes: rolled ferrous metals, hardware, raw materials for ferrous metallurgy, metal pipes, and nonferrous metals; solid fuel,

gas, and petroleum products; electric and thermal energy; chemical output and industrial rubber products (60 items out of 1,200), timber materials, cellulose and paper output (45 items), construction materials, raw materials for the light industry (26 items), foods (21 items); the output of heavy machine building (751 items) and of machine tool construction, electrical engineering equipment, chemical and petroleum equipment, motor vehicle and agricultural machine building (242 items), and communications equipment.

The industrial output balances exist in a complex interdependence which is a result of the diversity of the inter-branch and intra-branch relations in the economy.

For example, machine building which consumes a substantial proportion of the output of ferrous and nonferrous metallurgy and of the branches of the chemical industry substantially determines the production levels for ferrous and nonferrous metals, plastics, rubber, industrial rubber, paint and dye, and other products.

The development of material balances for the most important types of industrial and agricultural output during the process of current and long-term planning makes it possible to:

a) with the help of scientifically substantiated expenditure norms for certain types of industrial output to establish balanced amounts of the production of other output, taking account of progressive changes in the branch structure of material production;

b) perform an economically substantiated distribution of capital investments among the different branches of the economy, and to calculate the necessary production levels for industrial and agricultural output, while determining the most expedient directions for the development of the branches of the economy and of individual production;

c) to perform the most efficient distribution of industrial and agricultural output among the union republics, USSR ministries and departments, construction organizations, and enterprises and construction projects, while seeking to ensure the necessary correspondence between production and capital construction plans;

d) to work out a state plan of inter-republic deliveries of industrial and agricultural output which corresponds to the most expedient division of social labor among the union republics;

e) to coordinate the development of the economy of the USSR with the development of the economy of the entire socialist camp.

The material balances and industrial and agricultural output distribution plans are a component part of the current plans for the development of the economy.

With the help of the balance method of planning planning agencies find it possible to direct material resources toward the accomplishment of the most important tasks of the economy, to punctually discover disparities in the development of individual branches of production and areas of the country, and to eliminate possible inter-branch and intra-branch disproportions.

[Question] What are the distinctive characteristics of the scheme and content of the basic items and sections of the material balances?

[Answer] The state plan for the material and technical provisioning of the economy consists of two parts--the material balances of the most important types of means of production, and the plans for their distribution. The material balances show output resources and its functional distribution. The basic sources of resources are domestic production, imports, residuals at the beginning of the planning period, and other sources, including secondary raw materials.

For example, in 1975 use was made in the economy of 44 million tons of ferrous metal scrap and waste, 1.5 million tons of nonferrous metal scrap and waste, 23.8 million cubic meters of returned packing (wood and cardboard in terms of round timber), 1.25 million tons of worked sulphuric acid, and 3.68 million retreaded tires.

Since the draft plan is made up several months before the beginning of the planning period, the balances have included in them the so-called expected residuals which are determined on the basis of the actual residuals on the last reporting date.

The basic expenditure directions are reflected in the material balances: for the production of industrial output and for operational needs, for capital construction, for sale to the population (market allocation), for exports, for the replenishment of the state reserve, and for the creation of production stocks.

Production and operation needs which comprise up to 75-90 percent of consumption for many types of output are the basic item of the distribution part of the balance. This item includes the need for the production of finished output, for current and capital repairs, the mastery of new equipment, the production of non-standard equipment, incompleted production, the replenishment of production stocks, and for many types of output (petroleum products, chemicals, cellulose and paper output, and foods)--the need for capital construction. An independent item--"Capital Construction"--is distinguished in the metal and timber and construction materials and equipment balances.

Overall balances which include all types of interchangable output are used in planning. Thus, the boiler and furnace fuel balance reflects the resources and expenditure of coal, mazut, natural gas, shale, peat, wood, and other types of fuel in conventional computation. The roofing materials balance includes asphalt roofing, rubberoid, roofing felt, slate, tile, roofing iron, and

others. The overall balances discover resources of all materials which have the same function, and provide for their correct use and for the top-priority development of the production of the most effective materials.

In ferrous metallurgy, the chemical and light industries, and in certain branches of machine building branch balances are worked out. Thus, branch balances for all of the basic types of output are composed in ferrous metallurgy: pig iron and cast iron, ferro alloys, coke, steel, and rolled goods. They ensure normal work not only for the branch as a whole, but also for individual enterprises, since they establish a correspondence between production processes.

When the drafts of long-term plans are elaborated estimated material balances of the most important types of industrial output are composed. In these balances the needs of the branches of the economy are determined by the years of the future period and on the basis of consolidated indicators and norms, with a decrease in the latter taken into account. The purpose of the estimated balances is a scientific substantiation of the future plans for the development of the economy, and the establishment of effective economic proportions. In addition, the necessity for the creation of new production capacities is discovered.

The role of the estimated material balances in planning has been becoming continually more important. For the 10th Five-Year Plan Gosplan USSR worked out balances with an annual distribution for 232 of the most important types of output, and for the 11th Five-Year Plan--for 400 types.

The material balances are made up for individual types of output and reflect the direct relations between technologically independent productions. They are unable to ensure a complete coordination of needs and resources since they do not show the indirect relations of the various productions. For this reason the system of material balances is supplemented by the inter-branch balance of the production and distribution of output in the economy. It plays an important role in the establishment of the inter-relationships between the branches of the economy, and makes it possible to determine the amount of the production of the various types of output with the help of coefficients of direct and full expenditures, and to calculate plan variants at the stage of the development of the basic directions of the development of the economy.

With the help of the inter-branch balance which is worked out in value and physical terms, the quantitative relations between the branches of the economy and the necessary rates and proportions of their development are disclosed.

[Question] Is a uniform procedure for the development of the material balances provided for, and what are its distinctive characteristics?

[Answer] At the beginning of the year preceding the planning year the divisions of Gosplan USSR work out a draft plan for the development of the economy and preliminary material balances containing a specification of the basic expenditure directions. Even before the composition of the draft production and

capital construction plans and before the receipt of material resources requisitions from ministries, departments, and union republics Gosplan USSR usually works out several variants of the draft plan.

The development of the balances in the plans for the distribution of the output of the products list of Gossnab USSR has been made the responsibility of the All-Union Main Administration for Sales and Supply and its territorial agencies.

One of the most important directions in the development of the drafts is the coordination of the amount of production and of capital construction with material and technical supplies.

The coordination of the plans and of the preliminary balances begins long before the beginning of the planning year. Before anything else, the estimated material balances are made up. The amounts of the production of the basic types of output necessary for this are determined by the branch divisions of Gosplan USSR. The production and construction growth rates are established in the first variant of the material balances on the basis of consolidated expenditure and production volume normatives first of all in the consuming branches.

Preliminary estimated balances are worked out for the most important output. At the same time, the basic proportions in the development of social production and consumption are established, and bottle-necks are brought to light. The composition of such balances is concluded with the working out of proposals and measures to ensure the proportional development of all of the branches of the economy. After this the preparation of the second plan variant, already a more balanced one, begins. Then, the preparation of the third, and so forth. In this way, the plan grows closer and closer to the optimal.

In planning work it is important to have performance schedules, plan forms and indicators, a planned products list, and plan development methods which are uniform and mandatory for all. In connection with this, on definite dates Gosplan USSR sends capital holders the plan forms, indicators, and products list, and methods instructions on its composition.

An important stage of the development of the material balances is the determination of the needs of enterprises, ministries, departments, union republics, and the economy for material resources. Even negligible errors in this work sometimes have a negative effect on the economy not only of individual enterprises, but of branches of the economy.

The methods of determining the needs of an enterprise (branch) and of the economy as a whole are different. Whereas in the first case the point of departure is concrete types of operations and individual norms, in the second it is enlarged indicators and average mean expenditure norms.

In recent years the need for the most important types of material resources for the development of the first variants of the balances has been determined by Gosplan USSR in a centralized manner. Electronic computer equipment has been used here. The composition and the amount of technical and economic

information for these computations are established on the basis of the operating classifications of industrial and agricultural output, of the approved list of capital holders, and also the expenditure directions of material resources.

At enterprises individual expenditure norms are used to determine needs during the development of plan drafts. The following data is taken into account here: the output products list, the assignment for an average decrease in the expenditure norm and for an economy of material resources, technological documentation, loss and waste normatives, and the indicators of the assignment for the introduction of new equipment.

The assignments for an economy of material resources are of great importance in norm setting. On established dates capital holders present proposals on an average decrease of the expenditure and economy norms for the most important types of output for the planning year which have been worked out on the basis of proposals prepared by enterprises. Gosplan USSR examines these proposals and establishes assignments for an average increase in the expenditure norms for the planning year. The USSR ministries and departments and the union republics give enterprises differentiated assignments for an average decrease in the material resources expenditure and economy norms.

The composition of material balances is impossible without a consideration of norms and of actual stocks of raw materials and materials. In order to calculate the stock norms use is made of such calculators as the periodicity with which materials are put into production and of the production of output, the relationship between the transit and warehouse forms of deliveries, the seasonal nature of production, the transportation time for materials, and certain others.

[Question] What is the purpose of the elaboration of inter-product balances?

[Answer] In recent years the inter-product balance which is a system of material balances of the output of a concrete branch or of the economy has become widespread. The construction of such balances is useful in branches which are characterized by substantial intra-branch consumption and by complicated intra-branch relations: in the chemical, fuel, and metallurgical industries, and in machine building.

In particular, the proportion of intra-branch consumption increased substantially in the chemical industry during the 9th and 10th Five-Year Plans. The following example testifies to the complexity of intra-product relations here. Technical white arsenic is directly expended for the production of four products: they, in their turn, are expended for the production of more than 100 products. And the latter have 700 relationships.

The coordination of chemical output material balances in the inter-product balance is made difficult by the fact that they are worked out by various planning agencies. Thus, the balances for chemical and industrial rubber output are worked out by Gosplan USSR, the All-Union Main Administration for

the Chemical Industry, the Ministry of the Chemical Industry, and the USSR Ministry of the Petrochemical and Petroleum Refining Industry.

An important direction in the further improvement of the inter-product balance is the reflection in its scheme of relationships of the basic branches of the economy with the inter-product complex in which their output is consumed.

The experience connected with working out the inter-product balance for chemical output shows that it can become an important element in the system of needs calculations and of coordinating them with existing material resources and their distribution. A preliminary analysis demonstrates the expediency of working out such balances in the Main Administration for Inter-Republic Deliver- of Metal Products, the Main Administration for Inter-Republic Deliveries of Coal, the Main Administration for Inter-Republic Deliveries of Timber Products, the Main Administration for Inter-Republic Deliveries of Paper Products, the Main Administration for Inter-Republic Deliveries of Nonferrous Metal Products, the Main Administration for Inter-Republic Deliveries of Cement Products, the Main Administration for Inter-Republic Deliveries of Lumber and Building Materials, the Main Administration for Inter-Republic Deliveries of Petroleum Products, the Main Administration for Inter-Republic Deliveries of Heavy Machinery, the Main Administration for Inter-Republic Deliveries of Electric Energy, and the Main Administration for Inter-Republic Deliveries of Agricultural Machinery Products.

The close production relationships which exist between the individual main administrations for material and technical sales and supplies testify to the necessity for working out overall inter-product balances. The complex of machine building output which goes into the products list of the Main Administration for Inter-Republic Deliveries of Agricultural Machinery Products, the Main Administration for Inter-Republic Deliveries of Ball Bearing Products, the Main Administration for Inter-Republic Deliveries of Heavy Machinery, and the Main Administration for Inter-Republic Deliveries of Electric Energy may serve as an example. The production relationships of this output group are shown in Table 1. (See next page for table.)

In order to have an overall coordination of planning resources and to determine the needs for them in the whole of the output which is sold to the system of the main administrations for material and technical sales and supply it is essential, in our view, to develop a summary (including around 1,500-2,000 positions) inter-product balance for an entire consolidated products list on the level of Gossnab USSR.

The creation of a system of inter-branch models of balance calculations in material and technical supply in combination with the use of forecasting methods will ensure the determination of the need for output, the real dove-tailing and coordination of production and supply plans, the development of plans on the basis of the amount and structure of final output consumption, the attainment of multi-variants in plan calculations, and a coordination of the aggregated indicators which are determined on the national economic level (Gosplan USSR) with the indicators in detailed products lists (Gossnab USSR and the ministries and departments).

Structure of the Internal Production Relations
of the Machine Building Complex

Name of the Main Administration for Material and Technical Sales and Supplies	Consumption Level in Percent				
	Main Administration for Inter-Republic Deliveries of Agricultural Machinery	Main Administration for Inter-Republic Deliveries of Ball Bearing Products	Main Administration for Inter-Republic Deliveries of Heavy Machinery	Main Administration for Inter-Republic Deliveries of Electric Energy	Total in the Complex
Main Administration for Inter-Republic Deliveries of Agricultural Machinery	33.1	---	9.8	0.8	43.7
Main Administration for Inter-Republic Deliveries of Ball Bearing Products	33.6	1.4	15.0	4.8	54.8
Main Administration for Inter-Republic Deliveries of Heavy Machinery	0.4	---	23.7	1.9	26.0
Main Administration for Inter-Republic Deliveries of Electric Energy	9.8	0.1	20.2	23.2	53.3

[Question] Toward what end are the fulfillment balances made up, and what use do they find in the overall state system of material and technical supply?

[Answer] In contrast to the material balances-plans, the fulfillment material balances are made up on the basis of the results of work which has been done. They are a means of overall analysis which makes it possible to determine the degree of the realization of approved distribution balances and plans, to discover the reasons for their non-fulfillment, to determine the actual expenditure of resources in the branches of the economy in comparison with the planned expenditure, and to evaluate the reliability of the norms which have been adopted in the calculations. The statistical reporting which is in effect in our country, including the inventory of material resources remnants which is performed annually at the beginning of the year, serves as the basis for analyzing the dynamics of the movement of carry-over stocks of raw materials, materials, and fuel and of uninstalled equipment in the branches of the economy, union republics, and with suppliers.

For example, in 1982 the agencies of the USSR Central Statistical Administration, with the participation of ministries, departments, and main administrations for material and technical sales and supplies, worked up 156 fulfillment balances for a raw materials and materials products list. Including: 19--for rolled metals, 15--for piping, 23--for nonferrous metals, 13--for paper, and 46--for chemical and industrial rubber material.

During the same period of time 201 balances were made up for fuel and energy resources. Including: 38--coal and slates, 30--petroleum and petroleum products, 37--gas, 1--peat, and 95--electric energy.

The fulfillment material balances are becoming increasingly important in the work of the main administrations for material and technical sales and supply and the territorial agencies of Gossnab USSR. This work received especial scope after the publication in August 1980 of the Decree of Gossnab USSR, "On Measures to Further Raise the Level of the Elaboration and Utilization of Fulfillment Balances in the Composition of Material and Technical Supply Plans."

The introduction of fulfillment balances helps to raise the level of analytical work in the agencies of Gossnab USSR on the use of material resources. An analysis of the fulfillment balances for 1981 made it possible for the main administrations for material and technical sales and supplies to bring in a large additional amount of very important types of output in the following year. The Main Administration for Inter-Republic Supplies of Chemical Products, for example, brought in 770 tons of moulding powder, 1,167 tons of phosphorus pentasulphide, and 400 tons of lead silicate, and so forth. On the basis of the results of an analysis of fulfillment balances, the Main Administration for Inter-Republic Deliveries of Packing Materials brought 119,000 steel cans into economic turnover, the Main Administration for Rubber Products Sales and Supplies--884,000 meters of fabrics for the cable industry, and the Main Administration for Inter-Republic Deliveries of Nonferrous Metal Products--4.6 tons of dioxide cerium which is necessary for the production of color television sets, and so forth.

It has to be noted that until recently the work with fulfillment balances in supply agencies was a matter of their creative initiative and enterprises did not always respond to the requests of the main administrations for material and technical sales and supplies and territorial agencies for the presentation of the necessary reporting. Today the situation has changed.

In accordance with a proposal by Gossnab USSR, an order to the USSR Central Statistical Administration approved the statistical reporting in the form 1:cn (balance) "The Fulfillment Balance for the Expenditure (Use) of the Output of the Products Lists of Gossnab USSR." With this form, beginning with 1982, the fulfillment balances have to be worked out every year by all of the enterprises of industry, transportation, and construction which consume (utilize) the industrial output of the products list of Gossnab USSR in their production and economic work.

The fulfillment balances in the unified form 1:cn (balance) can be processed with the help of computers.

The fulfillment balances in the form 1:cn consist of two sections: "Resources" and "Distribution." The total in the section "Resources" must be equal to the total in the section "Distribution."

The output products list for which balances are presented is refined every year by Gossnab USSR and promptly reported to territorial agencies.

Table 2 cites data regarding the number of fulfillment balances which are worked out by the main administrations for material and technical sales and supplies.

Table 2

Fulfillment Balances Worked Out by the Main Administrations for the Material and Technical Sales and Supplies

Main Administrations for Material and Technical Sales and Supplies	1981	1982
Total	1017	1063
Including:		
Main Administration for Inter-Republic Deliveries of Chemical Products	94	138
Main Administration for Use of Secondary Resources	17	9
Main Administration for Inter-Republic Deliveries of Timber	5	19
Main Administration for Piping Sales and Supplies	6	2
Main Administration for Inter-Republic Deliveries of Electric Energy	129	79
Main Administration for Inter-Republic Deliveries of Cable Products	86	76
Main Administration for Inter-Republic Deliveries of Ball Bearings	6	6
Main Administration for Inter-Republic Deliveries of Chemical and Petroleum Machinery	11	11

As can be seen from the table, the output products list for which fulfillment balances are worked out undergoes changes with the years. For example, in 1982 267 positions for which the need was completely satisfied were excluded from the previously approved products list.

The reports on this products list are presented to the territorial agencies also by those enterprises to which the output of the products lists of Gossnab USSR is allocated directly by ministries and departments. In the same way, the territorial agencies of Gossnab USSR present the main administrations for the material and technical sales and supplies with summary fulfillment balances for the material resources which are allocated to enterprises directly by ministries and departments.

On the basis of an analysis of the use of the fulfillment balances the territorial agencies are supposed to conduct an examination with enterprises of the drafts of individual expenditure norms for an established output products list with regard to the data stipulated in the information sheets on the use of output in the basic expenditure directions which are attached to the fulfillment balances. This work is being successfully conducted today in a number of territorial agencies of Gossnab USSR (the Volgo-Vyatsk and West Siberian Main Territorial Administrations, Gossnab Georgian SSR, and others).

[Question] What kind of work is being conducted to improve the material balances?

[Answer] The basic directions of this work have been defined by the decree of the CPSU Central Committee and USSR Council of Ministers on improving the economic mechanism.

"To regard it as necessary," it is recorded in Point 16 of this decree, "to increase the responsibility of Gosplan USSR and the USSR ministries and departments for the balanced nature of the assignments of the state plans for the economic and social development of the USSR."

A precise procedure has been established for the development of the material resources balances and of their distribution plans.

In the Basic Directions of the Economic and Social Development of the USSR for 10 years balances are made up for the most important types of output which define the chief directions of its use in the final years of the 5-year plan. In the 5-year plan they are made up for a consolidated products list by years of the 5-year plan.

In order to improve territorial planning this decree has bound Gosplan USSR and Gossnab USSR, with the participation of the USSR ministries and departments and the Councils of Ministers of the union republics, to make up territorial balances of the production and distribution of the most important types of output. In accordance with these balances, the transport ministries have been charged with determining optimal freight flow schemes.

The use of electronic computers and mathematical economic models has opened up new possibilities in this work. The use of computers has been making it possible for Gosplan USSR to gradually free the USSR ministries and departments and the union republic Gosplans from the presentation of labor consuming calculations.

For example, for a number of years Gosplan USSR has been performing centralized calculations of the need for material resources for capital construction. Gosplan USSR performs the centralized calculations of the need for rolled ferrous metals, the most important types of piping, nonferrous metals, and other materials for the production of the output of the machine building branches.

With each year there is an increase in the amount of planning documentation which is issued by the Main Computer Center of Gosplan USSR by machine methods. Thus, in preparing the material and technical supplies plan for 1983 the proportion of normative documentation which was prepared with the help of computers came to 82 percent, which made it possible to concentrate the efforts of the workers of the balance and branch divisions on analytic work.

An important stage of balance work is the creation of the automated sub-system "Material Balances and Distribution Plans." In its operation this sub-system, which is a component part of the automated planning calculations system of Gosplan USSR, is supposed to ensure: the balanced nature of the long-term, medium-term, and annual material and technical supply plans for the economy, and to accomplish many other tasks.

A highly important condition for the successful operation of the "Material Balances and Distribution Plans" sub-system is the ensuring of interaction with the automated systems which are being created by the USSR ministries and departments, by the union republics, and by Gossnab USSR.

The increased dimensions of social production and the necessity for accomplishing special-purpose overall programs for the development of the economy which are designed for the long term require a comprehensive increase in the role of long-term and 5-year plans. The material balances are an important means of achieving this end.

Every material balance is based on a system of normatives, and on a system of assignments for the economizing of material resources. An exact execution of a balance is only possible when every enterprise, association, and ministry strictly fulfills the production plan and economy assignments which have been established for them.

The Soviet people is accomplishing great socio-economic tasks in the 11th Five-Year Plan. Substantial material resources are required for their realization. A purposeful and economical expenditure of these resources in industry, agriculture, construction, transportation, and other branches of the economy is one of the chief conditions for the successful fulfillment of the assignments which have been mapped out by the party.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Material'no-tekhnicheskoye snabzheniye", 1983

2959
CSO: 1820/118

TURNOVER RATE OF WORKING CAPITAL IN INDUSTRY

Moscow EKONOMICHESKIYE NAUKI in Russian No 5, May 83 pp 37-43

[Article by Candidate of Economic Sciences Docent V. Fashchevskiy: "On the Reserves of the Acceleration of the Turnover Rate of Working Capital in Industry"]

[Text] In the Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990 the task is posed to speed up the turnover rate of working capital during the 11th Five-Year Plan for the national economy as a whole by 2-3 days.[1] It is also envisaged "to increase the responsibility of economic managers for the results and quality of work, the fulfillment of the plan assignments and contractual obligations, the observance of the principles of cost accounting, the assurance of the profitability of production, the expenditure of the wage fund and the acceleration of the turnover rate of working capital."[2]

General Secretary of the CPSU Central Committee Comrade Yu. V. Andropov in a speech at the November (1982) CPSU Central Committee Plenum noted: "The main thing... is to expedite the work on the improvement of the entire sphere of the management of the economy--management, planning, the economic mechanism."[3] The more efficient and effective use of working capital, which is based on the improvement of its management at all levels of economic management, is one of the directions of this work.

The working capital of socialist industrial enterprises and associations is a significant portion of the national wealth of our country. At the beginning of 1982 in industry it amounted to 150.4 billion rubles and had increased as compared with 1966 by 2.8-fold.[4]

The USSR Council of Ministers adopted the decree "On the Commitment to the Economic Turnover of the Above-Standard and Unused Commodity Stocks, the Decrease of the Above-Plan Surpluses of Uninstalled Equipment and the Acceleration of the Turnover Rate of Working Capital During the 11th Five-Year Plan." Already in 1983 owing to the acceleration of the turnover rate of working capital it is planned to release 1 billion rubles.[5]

The problem of the more efficient use of working capital is closely connected with what its structure and dynamics are. Let us examine how the ratio of the components of the working capital has changed during the past three decades in industry (see the table). The proportion of production stocks, unfinished production and expenditures of future periods increases and the proportion of the capital in the sphere of circulation (finished products, the debt of customers for shipped

products and services rendered and other accounts receivable) decreases. Such a trend is progressive, and only the increase of the stocks of objects of labor in the warehouses of customers, which diverts working capital directly from the sphere of production and leads to the slowing of its turnover rate, is an exception here. The transfer of a certain portion of the production stocks (especially those which are consumed in a small amount and have a slow turnover rate) from industrial enterprises to supply and marketing organizations would make it possible to get rid of the surplus and unnecessary stocks and to improve the organization of warehousing services and would contribute to the acceleration of the turnover rate of working capital.

Structure of Working Capital in USSR Industry
(percent at the beginning of the year)*

Components of working capital	1951	1956	1961	1966	1971	1976	1981
Production stocks.	39.3	41.2	46.6	48.3	48.1	48.3	48.1
Unfinished production and semi-manufactures of own production .	14.5	15.4	15.2	16.5	16.9	16.5	18.1
Expenditures of future periods .	2.0	2.3	2.8	3.6	3.5	3.3	3.4
Finished products and goods. . .	16.3	16.8	15.0	13.5	11.1	11.3	11.0
Other commodity stocks	2.3	1.4	0.8	0.6	0.6	0.8	0.3
Shipped products and services rendered	10.0	11.0	11.2	9.9	8.5	8.6	8.2
Monetary assets.	6.0	5.8	4.8	4.0	6.6	6.2	6.0
Accounts receivable.	8.9	5.3	3.4	3.0	4.0	4.0	3.8
Other working capital.	0.7	0.8	0.2	0.6	0.7	1.0	1.1
Total working capital.	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Compiled according to the data of: "Narodnoye khozyaystvo SSSR v 1960 g." [The USSR National Economy in 1960], Moscow, 1961, pp 93, 97 (data at the beginning of 1951 and 1956); "Narodnoye khozyaystvo SSSR v 1967 g." [The USSR National Economy in 1967], Moscow, 1968, pp 862, 869 (data at the beginning of 1961 and 1965); "Narodnoye khozyaystvo SSSR v 1980 g." [The USSR National Economy in 1980], Moscow, 1981, pp 511, 514 (data at the beginning of 1971, 1976 and 1981).

The amount of unfinished production is under the influence of opposing factors. The development of specialization and cooperation decreases the length of the production cycle, the relative amount of expenditures and the stockpiles of unfinished production--all this accelerates the turnover rate of working capital. However, the complication of the designs of items increases the expenditures on their production and leads to the increase of the length of the production cycle; consequently, the unfinished production also increases, which slows the turnover rate. The influence of these factors for the most part cancels each other out, and the relative amount of the unfinished production changes negligibly. Such a situation is also due to sectorial differentiation: in some sectors technical progress causes a decrease of the length of the production cycle and the expenditures on the production of production, in others--an increase. The influence of these differences for the most part is mutually counterbalancing.

As for the advancing of assets for the expenditures of future periods, it is increasing, and this is connected mainly with the increase of the amount of expenditures on the assimilation of new types of items and their designing.

Fluctuations of the amounts of working capital during the month, as well as in its breakdown by individual stages of circulation occur in practice. The amount of production stocks reaches a maximum during the first days of the month and decreases significant toward its end; the balances of unfinished production at the beginning of the month are frequently less than the standard, then gradually increase and reach the optimum amount toward the middle of the month, while toward its end decrease again. The balances of finished products increase toward the end of the month, but at the beginning of the following month decrease as a result of the shipment of products. All these changes in the structure of working capital influence the effectiveness of its use.

The structure of the expenditures on production also influence the structure of working capital and its turnover rate. It is well known that as the productivity of national labor increases, the proportion of the expenditures of living labor in the production costs decreases, while the proportion of past labor increases. In industry the proportion of the wage and the deductions for social insurance in the expenditures on production in 1981 came to 14.8 percent as against 18.0 percent in 1965 and 21.2 percent in 1955.[6] This decreases the value and the proportion of the unfinished production and finished products, within which the wage is included, and accelerates the turnover rate of these components of the working capital. The proportion of embodied labor, on the other hand, increases: the proportion of the material expenditures (including energy) and amortization in 1981 came to 80.3 percent as against 75.7 percent in 1955.[7]

The trends of the change of the types of material expenditures and the items of the production stocks for industry as a whole coincide: the proportion of raw materials and basic materials is increasing, the proportion of auxiliary materials and fuel is decreasing. The structure of the working capital influences the indicator of the turnover rate. Of the production stocks the raw materials and basic materials are turned over the quickest; the rate of the turnover of auxiliary materials is slower. It is even less for spare parts and especially for inexpensive and rapidly wearing items. Since raw materials and basic materials hold the leading place in the composition of the production stocks, the increase of their proportion accelerates the overall turnover rate. The decrease of the proportion of living labor in the expenditures on production slows the turnover rate of working capital, since the portion of it, which is spent for the payment of wages and deductions for social insurance, turns over more rapidly than that which is spent for the creation of production stocks.

The duration and complexity of the production cycle and the conditions of supply, marketing, settlements and lending influence the structure of the working capital and its turnover rate. The optimality of the structure of the working capital to a significant extent depends on what efforts the collectives of enterprises take to elaborate economically sound standards, not to allow the accumulation of above-plan stocks and the immobilization of working capital and to improve the recording and monitoring of the use of resources.

In recent years inadequate attention was devoted to the acceleration of the turnover rate of working capital and the assurance of its preservation. The turnover rate of working capital during 1975-1979 in the sectors of industry slowed down by 4.8 percent.[8]

In particular, Moscow enterprises of the light and textile industries did not fulfill during the 10th Five-Year Plan the assignments on the acceleration of the turnover rate, which in 1980 had slowed as compared with 1975 by 14.4 percent. This was due to the increase of the average annual balances of working capital by 13.3 percent with an increase of the sales volume of products by 10.0 percent. The growth rate of the production and sale of products was planned in the amount of 13.1 percent, but during the 10th Five-Year Plan the production plans of enterprises were decreased by 448.4 million rubles without a change of the plans of material and technical supply. If the plans on the volume of output had been stable, the turnover rate would have remained at the 1975 level.

For Moscow enterprises and associations of the light and textile industries the above-standard stocks at the beginning of 1981 came to 87.6 percent of the standard. The total amount of the stock of working capital, for which standard rates are laid down, increased as compared with the beginning of 1980 by 9.7 percent, while the production of output increased by 2.4 percent. During the second quarter of 1981 the reserves of commodity stocks at Moscow footwear production associations exceeded the standards: the Zarya Association--3.7-fold, the Vostok Association--2.8-fold, the Burevestnik Association--2.2-fold. At the Burevestnik Association there are surplus and unneeded physical assets which have been in storage for more than 5 years.

For the purpose of increasing the interest of production associations (enterprises) in the better use of working productive capital and the economy of material resources it is envisaged by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 that the fee for above-standard stocks of physical assets is paid to the budget at the expense of the profit which is left at the disposal of associations and enterprises. If the plans of production and the profit are fulfilled with a smaller value of the capital than is envisaged in the plan, the saving on the fee for capital is left at the disposal of the associations (enterprises) and the payments to the budget, which are established for the ministry as a whole in conformity with the overall standard of the distribution of the profit, are reduced by this amount. Thus, the influence of the indicator of the fee for capital on the end results of the economic operations of associations (enterprises) increases. It seems to us that it would be advisable to differentiate the interest rates of the fee for capital subject to the reasons for the accumulation of above-standard stocks: if it is due to circumstances, which do not depend on the activity of the enterprise (the change of the production plans, the nonfulfillment by suppliers of the terms of the contract on the dates and completeness of deliveries, transportation difficulties in the case of the shipment of products and so on), the interest should be less than in instances when it is a matter of shortcomings which can be eliminated by the enterprises themselves (the lack of coordination of the plans of production and material and technical supply, the overstatement of the orders for materials, erratic work and others). This would make it possible to make the fee for capital a more effective lever of economic stimulation.

Credit of the State Bank, which at the beginning of 1981 came to 50.2 percent of all the sources of working capital in industry,[9] is the main source of the formation of above-standard stocks. In many cases credit is still being used ineffectively and actually does not promote the acceleration of the turnover rate of working capital. Payment credits, which in many cases have a term of use of more than 60 days, are being enlisted by enterprises instead of planned loans for covering

the above-standard stocks, for which credit has not been extended, of working capital for which standard rates are laid down. Interest in amounts, which considerably exceed the planned interest, is paid for such credits.

At the same time the economic influence on enterprises of higher interest rates is ineffective and does not promote the decrease of the above-standard stocks of working capital, for which standard rates are laid down, and the efficient use of internal working capital. For the interest for credit in all cases is paid at the expense of the net income, that is, from the profit by way of its distribution, in which the amounts of the interest being paid make up a negligible portion. The payment of interest for overdue loans, the credits, which form above-standard stocks which arose as a result of the unsatisfactory work of the enterprise, as well as the use of payment credits instead of planned loans should, in our opinion, be attributed directly to the decrease of the deductions from the profit for the material incentive fund. This will contribute to the optimization of the stocks of working capital, for which standard rates are laid down, the increase of the attention to its efficient use and, in the end, the acceleration of its turnover rate.

Frequently credit plays a passive role, being merely a source of the covering of expenditures, which mechanically follows in the wake of circulation. For the increase of the role of credit in the economic mechanism it seems necessary for it to be issued only in complete conformity with the progress of the fulfillment by the production associations (enterprises) of the plan assignments and on the condition of the proper use by them of both internal working capital and the previously received loans. In our opinion, the allocation of assets from the budget for the repayment of the loans issued to enterprises, which frequently occurs in economic practice, is also inadvisable. This is at variance with the requirements of cost accounting and actually leads to the nonobservance of returnability, that is, one of the most important distinctive traits of credit.

The unity of the process of socialist reproduction dictates the interdependence of the circulations of the individual components of the working capital. The variations of the rate of these circulations to a certain extent neutralize each other: the individual circulations, which are carried out in sequence, unite into a common turnover which has some average rate. The turnover rate of working capital during a specific period is also characterized precisely by it, although during individual days, months and quarters of the year the rate of the turnover, as a rule, deviates in one direction or another from the average rate under the influence of the interaction of the individual turnovers, which occur at different rates. The average rate of turnover is governed by the average length of the cycles of production and circulation. The ratio of the time of production and circulation determines the amounts of working capital which is tied up at the individual stages of circulation. The rate of the turnover of working capital is a complex indicator of the organizational and technical level of the association (enterprise) and industry as a whole.

For the present in economic literature there is no common point of view on the essence of the turnover rate. Some authors believe that "...by the turnover rate of working capital it is necessary to understand the ratio of the value of the products sold during a specific period (year, quarter) in wholesale prices to the amount of working capital, which was available at the enterprise during this period."[10] Other economists maintain: "...the turnover rate of working capital is its

movement in the process of expanded socialist reproduction, the change of forms (monetary, productive, commodity) in the process of the creation of the gross national product and the national income."[11] There is also the following opinion: "...by the turnover rate there should be understood the return of the monetary assets, which were initially spent in the production process, to their initial monetary form."[12] We believe that all these definitions are inadequately convincing.

The turnover rate of working capital is the rate of the passage by the advanced assets through the circulation and its individual stages. The calculation of its specific value is made by the comparison of the sold output with the amount of advanced assets. It is impossible, however, as is done in the first of the above-cited definitions, to reduce the turnover rate to such a ratio, because in this case its economic significance remains unclear. It is also necessary to delimit the concepts "the turnover of capital" and "the turnover rate of capital." What was spoken about in the second and third of the definitions mentioned here, characterizes the turnover of capital. The turnover rate expresses THE RATE OF THE TURNOVER [in italics] of the advanced capital and is connected with THE TIME OF THE ADVANCEMENT [in italics] of the value of the working capital in the circulation.

In practice the turnover rate is calculated as the length of one circulation in days. Since 1971 this indicator has been reflected in the reporting of associations (enterprises), which makes it possible to establish, by how many days the turnover rate sped up or slowed down as compared with the plan and the preceding period and how much capital was freed from the turnover as a result of the acceleration of the turnover rate or was additionally committed to the turnover as a result of its slowing. The importance of the indicator of the turnover rate lies in the fact that it makes it possible to determine the amount of capital which has been absolutely or relatively freed from the turnover. The more rapidly the latter turns over, the less of it the enterprise needs for the fulfillment of the production program.

Serious problems arise when calculating the turnover rate under the conditions of the creation and functioning in industry of production associations. Both fixed and working capital are allocated to them. The production units have quite extensive rights in the area of the formation and use of working capital. The association attaches to the production unit a portion of the working capital in conformity with the standards and can withdraw it in the case of a change of the latter. The association distributes working capital more efficiently between the production units, which increases the responsibility for the proper distribution of working capital and the effectiveness of its use. The centralization of financial and credit interrelations increases. At the same time the latter circumstance, which as a whole is positive, complicates the monitoring and analysis of the activity of individual production units, since the amount of reporting information being received from them decreases.

The turnover rate, which is calculated on the basis of the average balances of working capital and the sales volume of products as a whole for the association, far from always reflects accurately the actual rate of movement of this capital, even if it has been averaged out in terms of the number of production units belonging to the association. For some of them sell the products independently, others do not. The proportion of the deliveries of products within the associations by enterprises which retain legal independence is also significant. For example, the Moscow

Krasnyy proletariy Production Association has a large volume of shipments of products under subcontracting arrangements within the association. The four legally independent plants, which belong to it, carry out the shipment of products to the main enterprise in the amounts of respectively 82, 66, 50 and 14 percent of their output of products. In many instances a considerable territorial remoteness of the production units and the lack of unity of the technological process and contact with the main enterprise exist. Associations experience difficulties when making settlements for products, since the centralized making of payments for the association as a whole leads to the untimely reimbursement of expenses by the production units, which brings about on individual dates nonpayments for the main enterprise.

When calculating the turnover rate of working capital the balances of all the components of the capital are taken into account regardless of how many times these components have turned over and whether they were involved in the turnover at all. Therefore the turnover rate of all this capital is defined as the weighted average of the values which reflect the rate of movement of its components, including the fixed components. As a result the notion is formed that all the components of the working capital turn over with such an average rate, although in reality some portion of it could turn over more slowly or might not be involved at all in circulation. It is also necessary to calculate the individual rate of the turnover of the individual components of the working capital.

Along with the overall turnover rate there are indicators of the particular turnover rate of individual types of working capital, which reflect the rate of the transition of the given type of it to the next stage of circulation; they are calculated as the ratio of the average balance of the given type of working capital to its expenditure, which expresses the transition to the next stage of circulation. The importance of these indicators consists in the fact that the overall turnover rate depends on the rate of the passage by the working capital through the individual stages and phases of circulation. Consequently, by analyzing the indicators of the particular turnover rate, it is possible to find substantiated reserves of the acceleration of the overall turnover rate. However, in practice these indicators are not being used. In our opinion, for the purpose of improving the information base of the analysis of the use of working capital the indicators of the particular turnover rate should be introduced in the reporting of associations and enterprises.

The effectiveness of the use of working capital cannot be taken completely into account only by the indicators of its turnover rate, since they, while making it possible to trace the acceleration or slowing of the actual rate of turnover as against the plan or the preceding period, do not characterize, however, the degree of use of the working capital and the completeness of its yield and do not have a direct connection with the overall cost accounting indicators of production efficiency. In addition to the indicators of the turnover rate of working capital it is therefore advisable to use the coefficient of the lead of the growth rate of the volume of production of output over the rate of increase of the amount of working capital; the production of output per ruble of working capital, for which standard rates are laid down; the profit obtained per ruble of all working capital. These indicators can find a definite use; at the same time, like the indicator of the turnover rate, they are not without drawbacks. For the obtaining of output or a profit is achieved as a result of the use of not only working capital, but also other types of resources--fixed capital, as well as living labor. Therefore the comparison of the output or profit with the working capital is to a certain extent arbitrary

(just as in the case of the calculation of the turnover rate). Moreover, it is difficult to interest enterprises in the effective use of working capital in isolation of the improvement of the use of fixed capital and the increase of the productivity of living labor. For the better stimulation of the use of the entire amount of resources it seems necessary to use a system of interconnected indicators of the output-resource ratio when evaluating the activity of associations (enterprises). These indicators should reflect the use of all types of resources (fixed capital, working capital and living labor).

The improvement of material and technical supply, the increase of the coordination of the plans of production and supply and the completeness and timeliness of deliveries are of great importance for the acceleration of the turnover rate. In machine building not less than 30 percent of the idle times are due to the lack among the stocks (at the warehouses of enterprises) of the materials necessary for production, which for the most part is a consequence of shortcomings in the organization of material and technical supply. A similar situation is also frequently observed in other sectors of industry.

The increase of the progressiveness and degree of economy of the standards of the consumption of raw materials, materials and energy and accordingly their actual specific consumption is conducive to the acceleration of the turnover rate. There are significant reserves here. For example, norms which were approved by the USSR Ministry of Light Industry back in 1970-1975 are in effect at the Moscow Zarya, Vostok and Burevestnik Footwear Production Associations.

At the 26th CPSU Congress the task was posed to use material resources economically, in particular, to decrease in machine building and metalworking the rates of the consumption of rolled ferrous metal products by not less than 18-20 percent.[13] This will decrease the need for production stocks and, consequently, will accelerate the turnover rate of working capital.

The decrease of the length of the production cycle is of great importance for the acceleration of the turnover rate. The introduction of new equipment and advanced technology, complete mechanization and automation, the further development of specialization and cooperation and the improvement of the organization of production--all this, by increasing labor productivity, decreases the need for working capital, by promoting the acceleration of its turnover rate on the basis of the decrease of the length of the production cycle and the decrease of the product cost.

It is also necessary to accelerate the turnover rate of the working capital, for which standard rates are not laid down. The consideration when calculating the profitability and the fee for capital of the assets, for which standard rates are not laid down and which arise due to the shortcomings in the work of the enterprise, can play a substantial role in the stimulation of enterprises to decrease the amounts of capital. There should be included in the case of these calculations all the assets for which standard rates are not laid down, except the balances of shipped products, the dates of the payment for which have not arrived, since their increase is due to the increase of the radius of shipments, which does not depend on the supplier (this is necessary for the development of the regions of the North, Siberia and the Far East), as well as the balances of monetary assets, in the increase of which the effect of the freeing of working capital as a result of the acceleration of its turnover rate manifests itself.

The changeover to the planning of the balances of shipped products and the accounts receivable, which are of a stable nature, is of great importance. It is advisable to encompass by planning all the capital in the sphere of circulation and its sources in the form of bank loans and normal accounts payable. This would stimulate the efficient distribution of capital in the sphere of circulation and would accelerate the turnover rate. The planned balances of the unjustified accounts receivable (for example, shipped products which have not been paid for on time) should be established with allowance made for the reserves of their gradual decrease. The normal indebtedness on shipped products, the date of the payment for which has not arrived, should be planned on the basis of the average amount during the preceding period, which has been adjusted for the change of the amount of activity of the enterprise, with allowance made for the impending change of the forms of the settlements for shipped products. The coverage by planning of all the capital in the sphere of circulation and its sources will stimulate the efficient distribution of the capital both among the spheres of production and circulation and within the sphere of circulation and will accelerate the turnover rate of capital in settlements. Some experience of planning the working capital, for which standard rates are not laid down, has already been gained. For example, the indicators reflecting the balances of shipped products are envisaged by the USSR State Planning Committee in the calculations for the national economic plan when determining the volume of sold products. The capital diverted to shipped goods and accounts receivable are taken into account by the USSR State Bank when extending credit to enterprises.

FOOTNOTES

1. See "Materialy XXVI s"yezda KPSS" [Materials of the 26th CPSU Congress], Moscow, 1981, p 142.

2. Ibid., p 143.

3. "Materialy Plenuma Tsentral'nogo Komiteta KPSS. 22 noyabrya 1982 goda" [Materials of the CPSU Central Committee Plenum. 22 November 1982], Moscow, 1982, p 8.

4. See "Narodnoye khozyaystvo SSSR. 1922-1982" [The USSR National Economy. 1922-1982], Moscow, 1982, p 555.

5. See V. F. Garbuzov, "On the USSR State Budget for 1983 and on the Fulfillment of the USSR State Budget in 1981," PRAVDA, 24 November 1982, p 4.

6. See "Narodnoye khozyaystvo SSSR. 1922-1982," p 178; "Narodnoye khozyaystvo SSSR v 1965 g." [The USSR National Economy in 1965], Moscow, 1966, p 165; "Narodnoye khozyaystvo SSSR v 1956 g." [The USSR National Economy in 1956], Moscow, 1957, p 100.

7. See "Narodnoye khozyaystvo SSSR. 1922-1982," p 178; "Narodnoye khozyaystvo SSSR v 1956 g.," p 100.

8. See V. Ionov, "Finance in the Economic Mechanism," EKONOMICHESKIYE NAUKI, No 4, 1981, p 92.

9. See "Narodnoye khozyaystvo SSSR v 1980 g." [The USSR National Economy in 1980], Moscow, 1981, p 511.

10. Z. S. Katsenelenbaum, "Osnovnyye i oborotnyye sredstva v mashinostroyenii" [Fixed and Working Capital in Machine Building], Moscow, 1958, p 73.

11. A. M. Birman, "Planirovaniye oborotnykh sredstv" [The Planning of Working Capital], Moscow, 1956, p 194.

12. I. S. Seslavinskiy, "Oborotnyye sredstva promyshlennykh predpriyatiy" [The Working Capital of Industrial Enterprises], Moscow, 1961, p 56.

13. See "Materialy XXVI s"yezda KPSS," p 142.

COPYRIGHT: Izdatel'stvo "Vysshaya shkola", "Ekonomicheskiye nauki", 1983

7807
CSO: 1820/126

INTENSIFICATION AS DECISIVE FACTOR OF ECONOMIC GROWTH

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 5, May 83 pp 103-109

[Article by V. Silin and A. Sukhov: "Intensification--The Decisive Factor in Economic Growth"]

[Text] The economy of our country is characterized by dynamic and proportional development. Every year there are increases in the amount of national income, and in the output of industry, agriculture, construction, and the other branches of the economy. The country's scientific and technical potential is growing, the qualitative composition of its labor resources is improving, and the scope of the use of the achievements of scientific and technological progress is expanding. At the same time, the party's course of further improving the well-being of Soviet people demands constantly increasing expenditures for these purposes. Thus, in 1983 alone 3.4 billion rubles are being allocated for centralized measures to improve the well-being of Soviet people.

As a rule, a growth of social production and capital construction gives rise to the necessity for an ever-increasing involvement of raw material, material, and labor resources in economic turnover. The increased cost of the mining of minerals which has occurred in recent years, the increased expenditures for environmental protection, and the limited possibilities for attracting additional labor power requires that the growth of our production potential and the solution of major social problems be achieved on the basis of increasing the efficiency of production and the quality of all work, a fact which was especially emphasized at the November (1982) Plenum of the CPSU Central Committee.

It was noted at the 26th CPSU Congress that every branch of the economy is faced with its own specific and important tasks. But there are problems which affect all of the spheres of the economy, and the chief one is to complete the transition to a primarily intensive path of development for it. This approach is increasingly finding a reflection in the economic plans. In the report by N. K. Baybakov, "On the State Plan for the Economic and Social Development of the USSR for 1983 and the Course of the Fulfillment of the Plan in 1982," it is emphasized that the State Plan for 1983 was worked out in accordance with the social and economic strategy of the CPSU which is directed toward an intensification of all of the branches of social production and an increase in its efficiency, the extensive introduction of scientific and technical achievements, a modernization of the base branches of industry and transportation, and the realization of a strict regimen of economizing in the economy.

An intensification of social production is a lawful phenomenon which is characteristic of the economy of developed socialism. This many-sided concept applies both to the process of production itself, and to the organizational and economic conditions for its operation. The components of intensification are an acceleration of scientific and technological progress, an increase in labor productivity, a comprehensive economizing of material and raw materials resources, and the modernization of the base branches of the economy.

An Acceleration of Scientific and Technological Progress

It was noted at the November (1982) Plenum of the CPSU Central Committee that our economy possesses large reserves of efficiency. These reserves, Yu. V. Andropov stated, have to be sought in a wide and rapid introduction into production of the achievements of science, technology, and advanced experience.

Unfortunately, matters are moving slowly. Despite expenditures for science which increase every year, the necessary yield is not being achieved. For this reason, there has to be a fundamental improvement in this field, since without this a rapid transition by the economy to an intensive path of development is inconceivable. The most advanced equipment which will ensure an increase in labor productivity not of one-two percent, but of several times over has to be introduced at accelerated rates. Industry is creating this kind of equipment, and there are examples of its efficient use. Thus, in the petroleum extracting industry the introduction of new methods of influencing petroleum seams brought an additional extraction of 2.25 million tons of petroleum. For the gas industry the year 1982 saw the production of the first consignment of gas piping units with a capacity of 16,000 kilowatts, and with a productivity 1.6 times greater than that of the units presently in use. Equipment complexes have been created for the automated welding of large diameter pipes of the "Sever" and "Styk" types which bring about an increase of three-five times in labor productivity at welding operations and an improvement of the quality of welding. Such examples could be cited for other branches of industry also, particularly coal, ferrous metallurgy, the chemical industry, and machine building.

Along with positive examples, there are also quite a few cases of lagging in the fulfillment of scientific and technical assignments. There has been important lagging in the mastery and introduction of new equipment and technology in the USSR Ministry of Energy, the USSR Ministry of Construction, the USSR Ministry of the Petrochemical Industry, the USSR Ministry of Timber and Paper Industry, and the Main Administration for the Microbiology Industry. As a result of this, there are failures to deliver energy equipment, including for atomic electric power stations, and the production of motor vehicle tires, sulphur, and others does not correspond to contemporary requirements.

The development and realization of special-purpose overall scientific and technical programs has been acquiring ever increasing importance for an acceleration of scientific and technological progress. As is known, at the present time 170 state programs have been approved, with 41 of them being special-purpose programs which have to ensure the realization of the most effective scientific

and technical achievements, including the series production of new output as early as the current 5-year plan. More than 120 programs are aimed at the creation of the most important scientific and technical means and technological processes and materials which will be introduced during the 12th Five-Year Plan. The realization of the overall programs will make it possible to economize during the 11th Five-Year Plan alone 4 million tons of ferrous metals, 50 million tons of conventional fuel, and 14 billion kilowatt-hours of electric energy, and to achieve the relative release of around 3 million people.

Unfortunately, not all of the overall programs which have been adopted are being fulfilled satisfactorily. Their realization is one of the most important tasks of the 11th Five-Year Plan. These programs have entered as a component part into the country's economic and social development plan for 1981-1985. However, such ministries as the USSR Ministry of Ferrous Metallurgy, the Ministry of Heavy Machine Building, the Ministry of Electrical Engineering Industry, the Ministry of Instrument Making, the USSR Ministry of Energy, the Ministry of Agricultural Machine Building, and the Ministry of Construction for the Petroleum and Gas Industry have not properly organized the work to fulfill individual programs.

Thus, a special-purpose program for the creation and mastery of economical processes and methods of processing Kansko-Achinsk coal provides for the introduction of a technology for converting coal into liquid and gaseous fuel; it is planned for this purpose to create in 1985 an experimental industrial coal gasification installation at the Novotul'skaya Heat and Electric Power Station. However, the USSR Ministry of Energy has not provided for the construction of this object in the plan for 1981-1985. The Ministry of Agricultural Machine Building is slow with its reconstruction work: of the Onega Tractor Plant, which will lead to failures to deliver non-choker logging tractors during the 12th Five-Year Plan for the timber industry; and of the Rostov "Krasnyy Aksay" Cultivator Plant and the Kirovograd "Krasnaya Zvezda" Plant which have the task of mastering the most important types of high power saturation tractors and the agricultural machinery sets for them.

The basic reason for the lagging with the above tasks is that the ministries do not allocate the necessary capital investments for the construction and reconstruction of these very important objects. Yet, as was emphasized at the November (1982) Plenum of the CPSU Central Committee there has to be a priority allocation of all of the necessary capital, material, and labor resources for the creation of advanced equipment and technology.

An improvement of output quality is a highly important direction of scientific and technological progress. Thus, the use of higher quality means of labor contributes to a relative decrease in the need for them in the sphere of operation of the economy of social labor. The accomplishment of these tasks demands a high quality for raw materials, materials, and consumer articles. An improvement of the quality of output and of its reliability and service life is an important factor in the intensification of production. In his speech at the November (1982) Plenum of the CPSU Central Committee the General Secretary of the CPSU Central Committee Yu. V. Andropov pointed to the necessity for

creating rigid economic and organizational conditions which stimulate high quality and productive labor, initiative, and a spirit of enterprise. And, on the contrary, poor work, idleness, and irresponsibility have to be reflected in the most direct and inevitable way in the material rewards, work status, and moral authority of workers.

Many labor collectives are achieving the necessary quality level for output. They include above all such collectives as the Magnitogorsk Metallurgical Combine, the Perm Telephone Plant, the Leningrad Transportation Center, N. Zlobin's construction team, and others. A conscientious attitude toward work, and a search for new ways for improving the quality of labor and output bring about an enormous economic effect. Thus, during the years 1976-1980 the economic effect from the introduction of new equipment came to an annual average of 4.4 billion rubles, compared to 3.4 billion rubles in 1971-1976. By 1985 the proportion of highest quality category output in the total commodity output of industry will increase to 20.5 percent, compared to 15.5 percent in 1980 and 6.5 percent in 1975.

The socialist competition for an improvement of output quality is taking place under the slogans: "The Worker's Guarantee for the Five-Year Plan of Quality," "From the High Quality of Each One's Work to the High Efficiency of the Collective's Labor," "From the Design to the Product--A Guarantee of Quality," and "Engineering Support for the Worker's Initiative."

In December 1982 the CPSU Central Committee approved the initiative of the collectives of a number of enterprises of the Ministry of Agricultural Machine Building, Minzhivmash [Livestock and Fodder Machinery], and the Ministry of Machine Building for the Light and Food Industry and Household Appliances in developing a socialist competition under the motto of "High Quality, Reliable, and Efficient Equipment for the Food Program." The initiators of the new competition--the collectives of the Minsk Tractor Plant imeni V. I. Lenin, "Tselinogradsel'mash," "Gomsel'mash," and the Plavsk "Smychka" Machine Building Plant Production Associations--have adopted additional commitments to substantially improve the technical level, quality, and reliability of the equipment for agriculture and the food branches of industry before the end of the 5-year plan.

An Increase in Labor Productivity

Labor productivity characterizes the most important connection between live labor and the means of production in the production process. An increase in it directly influences the efficiency of social production, the growth of national income, and an increase in the dimensions of the economy. However, as was pointed out at the November (1982) Plenum of the CPSU Central Committee, labor productivity has been increasing at rates which cannot satisfy us. Moreover, in recent years there has been a tendency toward a decrease in the growth rates of labor productivity. Whereas during the 9th Five-Year Plan labor productivity increased in industry by 34 percent, or by an annual average of 6 percent, in the 10th Five-Year Plan the increase came to only 17 percent, or an annual average of 3.2 percent.

There has been no improvement yet during the current 5-year plan. The State Plan for 1981 envisaged an increase in labor productivity of 3.6 percent, while its actual increase was only 2.6 percent.

A large number of enterprises have not been fulfilling their established assignments for an increase in labor productivity.

In recent years an unsuitable practice has taken root in industry--the establishment of more intense assignments for an increase in labor productivity for the end of the year. Thus, in 1981 in industry the increase in labor productivity which was provided for the third and fourth quarters was twice as great as that of the first half year.

An understatement of the labor productivity growth plans during the initial periods of the year does not stimulate a thorough use of existing reserves, and promotes an overfulfillment of the plans during the first two or three quarters of the year (for which enterprise leaders receive bonuses), while at the end of the planning period many ministries have to correct the plans in the direction of decreasing them.

What are the reasons for this situation? Above all, in the fact that there is a substantial lagging in the economy in the application of scientific and technical achievements, in increasing the efficiency of the use of fixed productive capital, and in commissioning and mastering new capacities. Shortcomings in the organization of production and labor are eliminated slowly, and at every step violators of production and labor discipline remain unpunished. Meanwhile, an efficient use of working time, and a decrease in non-productive expenditures and losses of it represent a major reserve for increasing labor productivity.

Working time is an irreplacable social wealth. " . . . An economy of time, like the planned distribution of working time among the various branches of production," K. Marx observed, "remains the first economic law on the basis of collective production. This becomes a law even at a much higher level."*

At the contemporary stage of the development of production the importance of the well-defined rhythm, of good organization, and of an efficient use of working time becomes much more important. The very concept of labor discipline has expanded and become more capacious. Nowadays it signifies not only the fulfillment of the requirements of factory regulations, but also a zealous and genuinely proprietary attitude toward work, its high quality, and the active personal participation by everyone in the collective struggle for the plan and for the fulfillment of commitments. Strong discipline is an important precondition for increasing production efficiency; it does not require capital investments, but it produces a tangible return.

The efficient use of labor resources depends upon raising the level of the

*K. Marx and F. Engels, "Works," Vol 46, Part I, p 117.

mechanization and automation of production processes, above all at operations which are connected with manual labor. The assignment for the mechanization of manual labor which is stipulated in the plan for the 11th Five-Year Plan ensures the release of 1.2 million people and is a minimal one, but it is not being fulfilled by ministries, particularly in 1981 by the USSR Ministry of Coal Industry, the USSR Ministry of Ferrous Metallurgy, the USSR Ministry of Nonferrous Metallurgy, the Ministry of Heavy Machine Building, and others.

The proportion of workers employed in loading and unloading and hoisting and transportation operations, and in the transportation of freight is decreasing especially slowly, although it is known that the effectiveness of measures to mechanize the labor of auxiliary workers is 2.8-3.5 times higher than to mechanize the work of basic workers.

Insufficient use is being made of the possibilities for economizing labor through an expansion and deepening of the specialization of industrial production. At the present time three-five percent of the total output of inter-branch use is produced at specialized enterprises. In machine building they account for 1.5-2 percent of the total products and services of inter-branch use. As consolidated calculations show, with the attainment of a higher level of specialization labor productivity growth rates at machine building could increase by many times over.

The socialist commitments which have been adopted for 1983 by the union republics, krays, oblasts, and enterprise collectives have the task of promoting a further increase in labor productivity. The basic efforts here are being concentrated on increasing production efficiency and improving the quality of work, strengthening labor and production discipline, achieving high final results, and fulfilling planning assignments ahead of schedule. For example, the socialist commitments of the workers of the Russian Federation provide for carrying out the overall mechanization and automation of more than 3,000 sectors, shops, and productions, putting 6,500 mechanized flow and automated lines into operation, and introducing around 2.5 million inventions and rationalizers' proposals into the republic's economy. The workers of the Ukrainian SSR have committed themselves to increase labor productivity growth rates by 1.3 times compared to the average annual ones during the first two years of the 5-year plan, to transfer 216,000 workers from manual to mechanized labor, to achieve the entire increase in the republic's national income, in agricultural output, and in the work volume in construction on the basis of an increase in labor productivity, to economize the labor of 600,000 people in the economy, to cover no less than 60 percent of industrial workers with team forms of organization and of payment, and to perform 45 percent of the construction and installation work by the method of team contracting.

An Economy of Raw Materials, Fuel and Energy, and Material Resources

An intensification of production presupposes the necessity for a thorough economy of raw materials, fuel and energy, and material resources. The requirement for a thrifty expenditure of all existing resources as a mandatory condition for the efficiency of socialist economic management was emphasized by V. I. Lenin from the first months of the establishment of Soviet power. He attributed

great importance to a zealous management of the economy, and to the economic education of the workers as genuine owners of production. "The owner of industry, the owner of the bread, and the owner of all of the products in the country--that is us. When this consciousness penetrates the working class in a profound way, when through its experience and its work it increases its strength tenfold, only then will all of the difficulties of the socialist revolution be conquered."*

During the years of Soviet power our economy has changed and a powerful rise of all of the branches of the economy on a new technical basis has been achieved. For this reason, with the present dimensions of production the importance of an economy of material resources at every workplace increases many times over. Whereas in 1980 a decrease in material expenditures in the economy as a whole of only one percent meant an increase in national income of six billion rubles, by the end of the present 5-year plan an economy of one percent will mean an increase in national income of approximately seven billion rubles.

However, as was noted at the 26th CPSU Congress and the November (1982) Plenum of the CPSU Central Committee, the reserves for economizing material resources are still not being used in a sufficient manner, a fact to which the attention of the ministries, departments, and union republics has to be directed. As a result of this, during recent years the materials intensiveness of social production has practically not decreased. Associations, enterprises, construction organizations, kolkhozes, sovkhozes, and the non-production sphere are being slow in carrying out and introducing energy- and material-saving measures. For this reason the rates of decrease in the energy intensiveness and metal intensiveness of our national income are extremely low. It cannot be regarded as normal that during the last ten years metal waste in machine building remains on the level of 20-22 percent.

Realistic assignments for economizing raw materials, materials, and fuel and energy resources have been established for the ministries, departments, and union republics for 1983. The successful fulfillment of the plan will depend to a large extent upon the realization of the planned energy-saving measures, upon an accelerated commissioning of new capacities at atomic electric power stations, and also upon increasing the use of secondary energy resources.

In particular, an economy of rolled ferrous metals in machine building has to be achieved above all on the basis of improving the design and weight characteristics of machinery and equipment, using progressive technological processes, decreasing the level of waste and of losses, and increasing the metal use coefficient. In capital construction there are substantial reserves for decreasing the expenditure of material resources on the basis of improving volume and layout solutions, decreasing the weight of structures, using progressive materials, improving norm setting for expenditures, and eliminating mismanagement in the use of material resources.

---

*V. I. Lenin, "Complete Works," Vol 36, p 466.

Beginning with 1983 the size of the assignments for economizing resources in all of the ministries and departments will be approved by the USSR Council of Ministers. In addition, the USSR Committee for People's Control and Gossnab USSR have been charged with carrying out systematic control over compliance with expenditure norms and over the fulfillment of assignments on an efficient use of raw materials, materials, and fuel and energy resources in the economy. Measures have been stipulated to strengthen stimulation for economizing material resources. For example, the products lists of materials and fuel and energy resources for a concrete economy of which bonuses are paid has been substantially increased, and the group of workers receiving bonuses and the amounts of the bonuses have been increased.

An Increase in the Effectiveness of Capital Investments

An increase in the economic potential of the USSR, the realization of its construction program, an expansion of the dimensions of its economy, a modernization of the economy's fixed capital, and, as a consequence, an increase in national income depend to a decisive extent upon the effectiveness of the use of capital investments.

A great deal of attention was devoted at the November (1982) Plenum of the CPSU Central Committee to the state of affairs in capital construction. Large amounts of capital are being allocated for the creation of new capacities and for housing and cultural and domestic construction. At the same time, their use leaves something better to be desired. The Plenum took note of such shortcomings in capital construction as the scattering of capital over a large number of objects, an insufficient proportion of reconstruction and modernization, and also an unsatisfactory organization of construction work itself. It is this situation which leads to the fact that in most of the branches of the economy, including industry, there is a systematic failure to fulfill the plan for the commissioning of production capacities and fixed capital. This is leading to a violation of planning proportions, to the emergence of partial inter-branch and intra-branch disproportions, to a disturbance of the work rhythm of related enterprises, and, as a consequence, to a decrease in general development rates.

Meanwhile, a fuller and more efficient use of operating production capacities and the accelerated mastery of newly commissioned capacities, and the rapid reequipping and reconstruction of the country's production apparatus are very important factors of intensification. The aggregate of these operations has to be directed at disclosing intra-production reserves for increasing the production of output, eliminating the "bottle-necks" which hold back the production of individual types of output, improving the use of machinery, equipment, and transportation equipment, and decreasing idle time by them.

Recently a number of practical measures have been undertaken in this direction. Thus, in the planning balances of production capacities until the year 1985 it is planned to increase the use of production capacities for many basic types of output to 91-95 percent and more. However, in a number of branches the assignments of the 5-year plan are not being fulfilled. For many types of

output average annual capacities are being used in the range of from 70 to 85 percent, above all on account of intra-branch disproportions and a shortage of certain material resources, including rolled ferrous metals and agricultural raw materials. In 1981 an improvement of the use of production capacities was noted at the enterprises of only two machine building ministries.

In speaking about an expansion of the reconstruction front and an increase in its effectiveness, it should be kept in mind that capital investments for these purposes have been increased from 29.2 percent in the 10th Five-Year Plan to 32.5 percent for 1981-1985, or by 3.3 points, with a simultaneous decrease in the share of expenditures for new construction by 5.4 points. However, many ministries and departments are not displaying activeness in increasing the amounts and strengthening the work rates of reequipping and reconstruction, and are continuing to develop the branch on the basis of new construction and an expansion of operating enterprises. It is characteristic that of 752 construction projects with an estimated cost of more than three million rubles which have been included in the plan for 1981 and 1982, only 84 (11 percent) are beginning to be reconstructed.

Despite the increase in the 1983 plan in individual ministries of the proportion of capital investments being assigned for reequipping and reconstruction, low indicators have been set in the plan calculations for an increase on this basis of capacities and commodity output, for a decrease in the number of workers, and for a decrease in the cost of output. Thus, in the USSR Ministry of Light Industry with an allocation of 57 percent of the capital investments for these purposes, the proportion of an increase in commodity output on the basis of reequipping and reconstruction has come to only 39 percent, and in the Ministry of Machine Building for the Light and Food Industry the corresponding figures are 53.6 and 35.5 percent. The substantial discrepancy between the increase in capacities and capital investments being assigned for reequipping and reconstruction testifies to the diversion of capital and resources to other work.

The plan for 1983 provides for a substantial increase in capacities on the basis of the reconstruction and reequipping of operating enterprises. Capital investments for these purposes are planned in the amount of almost 24 billion rubles, which exceeds the indicators of the 5-year plan for this year by 1.1 billion rubles. The main content of the reconstruction and reequipping of operating enterprises has to be the complete or partial reequipping and restructuring of production involving the replacement of obsolete and worn out equipment. The performance of this work will ensure an increase in labor productivity and in output with smaller capital expenditures than for the construction of new enterprises, an increase in production capacities or an improvement of production technology, and a maximum decrease in labor intensive and heavy work.

The intensification of production presupposes a substantial improvement of the use of fixed productive capital. An increase in output production from each ruble of fixed productive capital of only one kopeck provides for obtaining 1.4 billion rubles worth of industrial products. The largest amount of fixed productive capital is concentrated in industry. As of the end of 1978 it came

to 592 billion rubles, or 32 percent of the country's capital. In agriculture its amount reached 255 billion rubles, and in transportation and communications 253 billion.

The basic directions for the economic and social development of the USSR for the years 1981-1985 and for the period until 1990 map out the realization of measures aimed at increasing the return on capital in all of the branches of the economy, and in all associations and enterprises. This requires: a search for possibilities to provide equipment with fuller work loads in time and capacity; the elimination of the causes for idle time; the elimination of bottle-necks; an acceleration of the commissioning and mastery of capacities; and an improved rhythm for production. All of these measures will make it possible to bring about the commissioning of fixed capital stipulated by the 1983 plan of 5.9 percent with an increase in state capital investments of 4.4 percent. It has been planned to further improve the production apparatus, and to raise the technical level and productivity of the means of labor and, above all, of its implements.

To a substantial degree the intensification of production depends upon the punctual and overall modernization of the base branches of industry. A failure to comply with this important requirement leads to a lack of integration in the development not only of these branches, but also of contiguous ones.

Thus, compared with the plan, over two years of the 5-year plan ferrous metallurgy failed to provide around 12 million tons of rolled goods, which has been having the effect of a non-fulfillment of planning assignments by a number of branches. For a number of years the USSR Ministry of Ferrous Metallurgy has been receiving a large amount of assistance in meeting projected plans for the production of rolled ferrous metals and steel piping. But the necessary results have not occurred. The chief limiting factors on a further growth in the production of ferrous metals are insufficient volumes of the mining of iron and manganese ores and of the production of coke. At a number of large quarries stripping operations and the construction and mastery of new capacities are being conducted slowly. The Ministry of Ferrous Metallurgy is being extremely slow in carrying out measures to restore coke batteries which have been taken out of operation, to repair the furnace fund, and to construct and master new capacities, and technological discipline is being violated.

For 1983 it has been planned: to substantially increase capital investments in ferrous metallurgy; and to ensure the necessary deliveries of technological and mining equipment for the construction of new enterprises and for the replacement of obsolete operating ones. It is necessary to increase the responsibility of the Ministry of Ferrous Metallurgy for the development of the branch, and for the efficient use of all resources.

Ever increasing attention is being devoted to the fuel branches. A large extraction of petroleum, gas, and other types of fuel has been achieved. However, the economy has been experiencing definite difficulties with uninterrupted fuel supplies for the most important branches of the economy and with providing for the population's needs. Under these conditions, the success of the fulfillment

of the 1983 plan will depend directly upon the fulfillment of the assignments on economizing fuel and energy resources by all of the branches and all consumers, including municipal ones.

In this connection, it will be necessary to strengthen control by Gosplan USSR and Gossnab USSR over the correct delivery to enterprises of their specific fuel, and electric and thermal energy expenditure norms. The situation cannot be allowed in which the norms established by ministries are higher than those adopted in the calculations of Gosplan USSR, and frequently higher than the actually attained ones. It is also important to increase responsibility on all levels for an absolute fulfillment of the fuel economy planning assignments.

Our 20th century is rightly called not only the century of atomic energy, of outer space, and of electronics, but also the century of chemistry. The products of chemistry are used widely in agriculture to increase the production of output, and they make it possible to organize the mass production of clothing, footwear, and other consumer goods. In other words, big modern chemistry has an important influence on increasing the effectiveness of the economy. For 1983 relatively high growth rates have been planned for the basic types of output of the chemical industry; however, they are nevertheless insufficient to fully overcome the serious lagging which has occurred in this branch and to come out on the frontiers which have been stipulated by the 5-year plan.

Special mention has to be made of the situation with mineral fertilizers. The Ministry for the Chemical Industry, the Ministry for the Production of Mineral Fertilizers, and the construction ministries have been devoting insufficient attention to the construction of plants for the production of mineral fertilizers and chemical plant protection agents, and have not been fully utilizing the capital investments allocated to them, with the result that a large number of production capacities for the production of mineral fertilizers has not been put into operation. Unfortunately, the situation has not been improving. It is essential to accelerate the construction of enterprises for the production of mineral fertilizers and chemical plant protection agents. For every ton of mineral fertilizers means an increase in grain.

It was noted at the 26th CPSU Congress that the final basis of scientific and technological progress is the development of science. And it is first of all machine building which has to introduce its achievements. Much is being done in the machine building complex to increase the efficiency of its work. However, there is still unsatisfactory work with the tasks of a large-scale renewal of the active part of fixed productive capital in the economy, and in the branch itself there is slowness in the production of mechanization equipment for loading and unloading operations and for manual labor, in economizing metal, and in the use of metal-saving technological processes in production.

It is machine building which has the responsibility for ensuring the accelerated growth of the productivity of social labor, and for the creation of conditions for the development of the productive and non-productive spheres of the economy without the enlistment of additional labor resources. It has to accomplish

a number of important social tasks connected with changing the character of labor and improving its conditions.

The fundamental characteristic of the development of machine building during the forthcoming period will be a radical improvement of the quality of equipment manufacture, an increase in its technical level and ability to compete, and also an accelerated renewal of machine building output. At the same time, the forthcoming 5-year plan has to become an important stage in the extensive development for all of the branches of the economy of progressive types of equipment and technology, and also the creation of the necessary production conditions for the serious production of new equipment.

Consequently, the effectiveness of the development of the economy, and the growth rates of technological progress and labor productivity are determined in the most direct manner by the situation in the branches which are the foundation of the economy. A consistent realization of the intensification measures will make possible a fuller use of our very rich possibilities for increasing social production.

COPYRIGHT: Izdatel'stvo "Ekonomika". "Planovoye khozyaystvo", 1983

2959
CSO: 1820/119

INTERNATIONALIZATION INFLUENCES INTERNAL ECONOMIC LIFE OF USSR

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 83 p 10

/Article by G. Sarkisyan, doctor of economic sciences: "Internationalization of Economic Life"/

/Text/ Developed socialism is characterized by an expansion and deepening of internationalization of economic and all social life of the soviet republics as an important factor in their economic and social progress. It is based on the development of a unified unionwide national economic complex, deepening integration of the economies of the republics and specialization and cooperation in production.

V. I. Lenin noted that ". . . All economic, political and spiritual life of mankind is becoming increasingly international even under capitalism. Socialism completely internationalizes it" (Vol 23, p 318).

Common Goals and Interests

The economic and social development of the soviet republics are carried out in keeping with principles of socialist internationalism, complete equal rights, fraternal mutual assistance and friendship of all nations and nationalities. It is characterized by an ever increasing interpenetration of international and national principles in economics and in social relations and by a strengthening of the unity of the republics.

Because of the emergence of the power of the working class and the establishment of socialist public property in our country, a firm foundation was laid for solving the national problem, for supporting the common economic goals and interests of the soviet republics, and for ensuring not only legal, but also actual equiality of all nations and nationalities.

Actual equality of nations consists primarily in an equal relationship of the people with respect to the means of production that are part of socialist public property, the lack of exploitation, equal rights and equal responsibilites of all workers, the equal right of all workers to obtain their portion of the public product according to their labor, its quantity and quality, and complete elimination of discrimination of workers in the amounts of payment, depending on their nationality, and the elimination of all forms of national oppression.

Today all republics have highly developed multibranch economies--modern industry, large-scale mechanized agriculture and the sphere of services, and the comprehensive development of the economies of the republics is ensured. Today in the USSR, as was emphasized at the 26th CPSU Congress, there are no backward national districts. At the same time each of the republics has its own unique image, its unique national features.

On the basis of comprehensive development of businesses we have fundamentally resolved the problem of equalizing the levels of economic development of the republics. They have reached an approximately equal level of productivity of public labor and technical support of the national economies. Relatively equal conditions have been created for efficient application of labor, fair distribution of the growing wealth among nations and nationalities, and complete realization of the broad constitutional rights of citizens, regardless of their place of residence or nationality.

The equalization of the levels of economic development of the republics that has been achieved has made it possible to provide relatively equal conditions for their all-around progress on the basis of more complete utilization of natural, material and labor resources.

This does not mean that we have completely eliminated differences in the levels of economic development of the republics. There are differences in the level of production of specific kinds of industrial products per capita and per unit of territory. These kinds of differences are essentially objectively conditioned, brought about by production specialization, and they will always exist. They are not related to economic backwardness and do not lead to inequality, but presuppose more efficient and proportional development of the economies of the soviet republics under the conditions of unionwide division of labor.

At the same time there are differences in levels of production that are related to insufficiently effective utilization of resources, internal reserves and natural and climatic factors. Certain republics do not fully take advantage of the possibilities of enlisting unemployed able-bodied population in public production and training skilled workers from the local population, especially rural youth. Under the current five-year plan measures are being taken which are directed toward solving this problem.

Integration of the Economy

The creation of the unified national economic complex, which constitutes the material basis for the friendship of the peoples of the USSR, was a qualitatively new stage in the development of the soviet economy.

In a report entitled "Sixty Years of the USSR," Yu. V. Andropov noted: "Modern productive forces require integration even when speaking about various countries. Even more they require close and skillful unification of efforts of various regions and republics in one and the same country."

Under the conditions of increased economic specialization and nationwide cooperation of labor, inter-republic economic ties expand and deepen. These are closely interwoven with interbranch ties. One can get a certain idea of

the scope of inter-republic economic ties from the indicators of the interbranch balance. Thus in material production the RSFSR utilizes products from 105 branches of other republics, and the RSFSR delivers to other republics products from the same number of branches. For the Ukraine these indicators are 106 and 104, respectively; Kazakhstan--90 and 63; and Moldavia--100 and 87 branches. Inter-republic turnover comprises one-fifth of the gross output of industry and agriculture and has a tendency toward more rapid growth with respect to material production of the union republics.

Economic integration of the republics has been raised to a new level because of the formation of fuel-energy, agro-industrial and other interbranch complexes, and also large territorial production complexes.

The unified national economic complex develops in the interests of all the people and its consolidation will serve as a basis for advancing the economies of all union republics. The economy of each republic occupies an important place in unionwide division of labor and makes an increasingly weighty contribution to the country's national wealth. At the same time successful resolution of unionwide national economic problems and the active mobilization of material and labor resources for these purposes provide a maximum effect both for the country as a whole and for each republic individually.

In the present stage when equalization of the levels of economic development of the republics is being achieved through joint efforts, it is especially important to approach economic problems primarily from the standpoint of balanced and effective growth of the entire national economy and the achievement of high unionwide results. At the November (1982) Plenum of the CPSU Central Committee they emphasized the need to increase responsibility for the observance of statewide and nationwide interests, and to decisively extirpate narrow departmental and local tendencies.

A key state task is to deepen the intensification of public production and increase the efficiency of the entire national economic complex. The main thing in the advancement of the economy of each republic is not so much increasing investments as more efficiently utilizing the entire economic potential at its disposal. It has become especially important to accelerate the increase in labor productivity, the main indicator of the effectiveness of the economy, to increase the return from production capital and capital investments, to improve product quality, and to economize on resources in all ways. It is important to achieve an increase in efficiency which will not only improve the state of affairs in the economies of the republics, but will also provide for the greatest national economic effectiveness. The solution to this problem should be accompanied by an elimination of the differences in the intensiveness of production among the republics, which is related primarily to improvement of territorial division of labor and the introduction of the results of scientific and technical progress.

Integration of Social Processes

Internationalization of economic life in the stage of developed socialism is combined with greater integration of social processes and an equalization of the levels and way of life of nations and nationalities. As a result, the

socialist way of life with the collectivism and comradeship that is inherent in it, the solidarity and friendship of peoples and the advanced art of international communication today determines the internationalist features of the way of life and behavior of all soviet people.

Internationalization of the way of life is accompanied by an equalization of the standards of living of the population of the republics. Of course, differences in the standards of living and life which are objectively conditioned by national and natural-climatic factors remain. We are speaking not about equality of absolute indicators of the standard of living, but about equalization of the degree of satisfaction of various needs in volume and structure, taking natural-climatic and other factors into account.

The source of the formation and the higher standard of living of the population of the country and of each union republic is the national income. But factors that determine inter-republic differences in production of the national income (net output) and factors that determine territorial differences in the consumption fund are unequal. Socio-demographic factors exert an essential influence on the formation of the standard of living of the population of the republics.

An increase in the national income created in the republic leads directly to a higher standard of living to the degree to which it involves increasing utilized labor, its quantity and quality, mainly through increasing wages. At the same time all republics should provide for relatively equal conditions for satisfying the spiritual and social needs and maintaining the ability to work as a result of public consumption funds, whose volumes in each case cannot be directly dependent on the national income that is created and are provided from nationwide funds.

As the analysis of statistical materials shows, at the present time the differences among the republics in terms of the level of real per capita incomes are usually not great and are conditioned to a considerable degree by differences in the structure of the population, primarily in the proportion of those who are unable to work, especially children.

In the modern stage there is a tendency toward equalization of the levels of wages among the republics. Their further equalization will depend primarily on improvement of the structure of the economies of the republics and reduction of interbranch differences in wages, and also equalization of the skills of workers and the conditions for their labor.

In inter-republic regulation of wages an important role is played by making sure that in each republic labor productivity increases more rapidly than wages do. As figures show, there are significant differences in the ratio between the growth of labor productivity and wages in various republics. Under the 10th Five-Year Plan in 6 republics the wages increased more rapidly than labor productivity did. The directive of the 26th CPSU Congress toward increasing labor productivity more rapidly than wages is of primary significance for all republics. Carrying it out under the current five-year plan is contributing to achieving a more complete correspondence between measures of labor and measures of consumption and a further reduction of inter-republic differences in wages.

Differences in the per capita amounts of public consumption funds among the republics are determined primarily by objective factors: peculiarities of their historical development, natural-climatic conditions, and demographic and national factors. Yet there are still differences that are related to unequal provision of the population with institutions of the sphere of services and shortcomings in the planning and utilization of funds for social and cultural measures. In an number of cases monetary payments from public consumption funds do not fully take into account the territorial differences in the expenditures on satisfying the same needs. One of the crucial tasks of the 11th Five-Year Plan is to further improve housing and living conditions and also social and cultural service for the population of the eastern regions of the country through public consumption funds.

Internationalization of economic life and extensive utilization of advanced experience in each republic are an important factor in increasing the efficiency of the unified national economic complex, further improving national relations, strengthening the friendship of the peoples, and bringing the nations even closer together.

11772
CSO: 1820/128

ENERGY, FORESTRY, AGRICULTURE IN SAKHALIN REVIEWED

Moscow EKONOMICHESKAYA GAZETA in Russian No 13, Mar 83 p 5

[Article by P. I. Tret'yakov, first secretary, Sakhalin Obkom of the CPSU: "The Working Rhythm of Sakhalin"]

[Text] Sakhalin Oblast is an important industrial region in the Far East that accounts for more than 12 percent of that region's industrial output. The oblast's agriculture is quite highly developed.

The party obkom and the oblispolkom, taking note of the basic directions in the development of the productive forces, organized the in depth study of these questions in all party organizations and labor collectives; the results were summarized at a scientific-practical conference. Participants in the conference included Far Eastern scholars and specialists of republic and union planning and economic organs. Future problems and basic directions of comprehensive development of the oblast's productive forces were analyzed. This preplanning work unquestionably embodies the wealth of experience of the oblast's labor collectives.

Strengthen the Energy Base

The oblast's considerable reserves of coal, oil, gas, peat, timber, geothermal springs, and the tidal power of its seas create favorable prerequisites for the resolution of problems associated with the development of energy and the satisfaction of the requirements of production, housing and municipal services for fuel and energy resources. A substantial increase in the volume of coal production in Sakhalin is slated for the year 1990. Accordingly, the "Boshnyakovo," "Shebunino" and "Tikhmenevskaya" mines are scheduled for reconstruction and a number of new facilities will be built. The implementation of the oblast coal mining industry's program will depend decisively on the potential of construction organizations belonging to Glavsakhalinstroy [Main Administration for Construction in Sakhalin] and the "Sakhalinugol'" [Sakhalin Coal] Association. Therefore, it is essential to develop their production base at a more rapid pace since it is one of the restraining factors in the construction and outfitting of mines and quarries.

The development of offshore deposits requires the elaboration of special technologies and equipment. Research and design work has been in progress for a number of years but unfortunately appropriate pilot plants have not yet been created to test them. They are needed not only for the development of deposits already discovered but also for the large-scale development

of the oil and gas industry in other Far Eastern and Northern seas. It appears that research and development work in this direction must be accelerated.

Thermal springs are a reserve of fuel and energy resources. To date the oblast has discovered more than 100 individual and clustered vents of thermal springs and high-temperature steam and gas flows. The problem of using this bounty awaits its solution.

A special word should be said about the development of energy facilities. It is planned to satisfy the growing energy requirement by increasing the capacities of Yuzhno-Sakhalinskaya TETs-1 [Heat and Electric Power Plant No 1]. However in the future this will not be enough. We must either build a new thermal electric power station (preferably one that operates on natural gas) or else expand the Okhinskaya TETs and the Sakhalinskaya GRES. The stability of electric power supply is another matter. It is adversely affected by gale-force winds, icing up and the heavy snowfalls that are frequent in Sakhalin. Therefore under the 11th and 12th Five-Year Plans, we must complete the construction of secondary networks of electric power lines thereby ensuring the reliable electric power supply of customers.

Problems of the Timber Industry Complex

The oblast occupies a leading place in the rational utilization of timber. Approximately 60 percent of it is used for chemical processing and 32 percent is milled. Pulp and paper production, the volume of which is continuously rising, is the basis of the timber industry complex. Unfortunately, in recent years its development has been impeded on the one hand by the existing disparity between the requirement for timber and the potential for procuring it and by the depletion of reserves for increasing the production of pulp and paper at the previous technical level.

As a result of intensive cutting in the past, logging operations have shifted to inaccessible mountain regions and the distance timber must be hauled has increased as a consequence. What is more, sizable areas of forest land have been designated as water conservation areas that are required in order to ensure the normal reproduction of salmon. As a result, the volume of logging in Sakhalin has decreased in recent years. Nonetheless the curtailment of logging must not be an obstacle to the development and technical retooling of the pulp and paper industry. In our view, the shortage of timber can be compensated by expanding the sulfate-based production of pulp from deciduous timber, to say nothing of active reforestation which requires that we work unceasingly on the creation of a permanent seedling facility.

The development of pulp and paper production in Sakhalin is important because more than half of the oblast's forestry enterprises and 25 percent of its road enterprises work for it. The timber industry complex uses approximately 30 percent of the transport services. Pulp and paper mills form the production and social infrastructure in seven of our cities. The increased effectiveness of the timber industry complex presupposes that we will more energetically raise the level of mechanization and automation of all production operations and that we will more widely use equipment, technology and production organization making it possible to reduce labor inputs to the maximum.

Contribution to the Food Program

The November (1982) Plenum of the CPSU Central Committee indicated that workers in the agro-industrial complex must from day to day increase their efforts and work in such a way that the enormous resources that are allocated for the fulfillment of the Food Program would yield a return already today and an even greater return tomorrow. Average annual gross agricultural output in Sakhalin in recent years has grown at a more rapid rate than the national average. The growth of agricultural production has chiefly been due to its intensification. Thus the yield of potatoes has grown by almost 35 percent; the production of vegetables grown in the open soil has increased by 27 percent; the production of perennial grasses has increased by 9 percent; and the production of root fodder crops has increased by 32 percent. The increase in the number of livestock and poultry has been accompanied by their higher productivity: the milk yield per cow on sovkhozes increased by 13 percent and surpassed the 3500 kilogram mark; egg output per layer increased by 32 percent. An important part has been played by the conversion of production to an industrial footing: the creation of poultry factories, hothouses, hog fattening and dairy complexes; and by the development of the material and technical base of the farms.

The existing level of development of the agro-industrial complex however does not make it possible to satisfy completely the population's growing need for the basic foods. At the present time, some of this need is met by shipments from other regions of the country. Therefore the goal is to reduce these shipments to the minimum in the future and to satisfy the need, especially for perishable foods that are in high demand by producing them ourselves if this is economically feasible. The oblast's agro-industrial complex will begin producing mixed feed under the 11th Five-Year Plan. Food industry enterprises will undergo further development. It is planned to increase potato, fruit and vegetable storage facilities and to expand the network of public catering facilities.

The bioresources of the oceans must be used more completely in order to resolve the food problem. Success in this area can be achieved only if there is uniform development of the basic and service branches of the fish industry: extractive, manufacturing, ship repair, net and packaging production, etc. Even now owing to disproportions in their development, our fleet is idle part of the time every year and the effectiveness of its work is considerably diminished thereby. In order to eliminate this substantial shortcoming, it will be necessary to rebuild the Nevelskiy and Kholmskiy ship repair yards and to expand the ship repair shops of enterprises belonging to "Sakhalinrybprom" [Sakhalin Fish Industry].

The artificial reproduction of salmon will play an ever larger part in the development of fisheries in the future. At present there are 18 fish hatcheries in operation in Sakhalin and in the Kurile Islands. With the aim of creating a large-scale salmon fishery under the 11th and 12th Five-Year Plans, the following fish hatcheries are to be rebuilt and their capacities are to be expanded as follows: Anivskiy--by 40 million fry a year; Taranayskiy--by 35 million fry a year; Berezniakovskii--by 30 million; and Ado-Tymovskiy--by 20 million fry a year. It has also been decided to build a new hatchery with a capacity of 21 million fry a year and to expand the nurturing facilities at existing hatcheries.

... such consistent, comprehensive development and improvement of the fish industry can ensure its high effectiveness and the maximum use of the ocean's biological resources.

The oblast party organization has amassed a great deal of experience in organizational and political education work and in managing economic and cultural construction. The oblast has reared cadres that have a feeling for the new, that master modern methods of management, that are capable of seeing the future and of conduct matters competently. Communists and all working people in Sakhalin and the Kuriles will make every effort to realize the tasks that stem from the resolutions of the 26th CPSU Congress.

The oblast's working people have pledged to fulfill the plan for 1983 by 29 December and to sell nine million rubles' worth of products in excess of the plan. The results of two months indicate that a good start has been made. On the whole, the two-month sales plan was fulfilled by 104.5 percent. Gross output in two months increased by 5.8 percent compared with the same period last year; labor productivity increased by 6.8 percent. Milk production increased by 9 percent and egg production increased by 10 percent. The oblast party committee is striving to create conditions so that every enterprise and all working people can work successfully under the 11th Five-Year Plan.

[illegible]
Case: 1820/135

FUNCTIONAL COST ANALYSIS IN LATVIA

Moscow EKONOMICHESKAYA GAZETA in Russian No 21, May 83 p 7

[Article by V. Leytan, deputy chairman, LaSSR Gosplan; chairman of the republic council for functional cost analysis: "The Objective: Cutting Costs. From the Work Experience of the Latvian Republic Council for Functional Cost Analysis"]

[Text] As we know, the lowering of the cost of raw materials and supplies by just one percent on a national scale makes it possible for the national economy to save more than six billion rubles. For our republic, one percent means 8500 tons of rolled ferrous metals, 24,000 cubic meters of timber, 11,000 tons of cement and many other types of products. We understand the importance of the task confronting every collective--the task of lowering production costs, of intensifying the economy program, of making rational use of supplies and energy resources. In the realization of the task in recent years, an ever greater part has been played by functional cost analysis which makes it possible to realize economies already in the stage of project-planning and design work.

The "Riga Electric Machine Building Plant" Association, the electric light and lighting equipment plants, and the experimental mechanization plant--these Riga enterprises belonging to the Ministry of the Electrical Equipment Industry were the first in our republic to use functional cost analysis [FSA]. Plant FSA councils headed by enterprise chief engineers were created. The councils included the heads of the leading services--design, technological, economic.

One example of the use of functional cost analysis in the "Riga Electric Machine Building Plant" Production Association can truly be called indicative. The reference is to the inductive shunt--a component part of the equipment of an electric train. The cost of producing it was significantly higher than the wholesale price. The item was not considered promising from the standpoint of increased efficiency. But the shunt was profitable and became more reliable after the implementation of ideas discovered through the FSA. The result was that the cost of producing it was reduced by almost 20 percent. The annual economic effect of reducing material and labor expenditures was 16,000 rubles. As a result of the implementation of FSA proposals, from the beginning of the 11th Five-Year Plan the Riga Electric

Machine Building Plant saved 150 tons of rolled ferrous metals, more than 700 cubic meters of lumber, a considerable quantity of solvents, copper, and other supplies and reduced the labor-intensiveness of a number of items. The economic effect is 370 thousand rubles.

The experience of other enterprises also attests to the effectiveness of functional cost analysis. Thus the electric light plant conducted FSA on six items and the economic effect from the introduction of recommendations was 128,000 rubles for 2 years of the five-year plan. It economized tungsten, molybdenum, tantalum, quartz and other materials. During the same period, the lighting equipment plant and the experimental mechanization plant realized an economic effect of 124,000 and 104,000 rubles respectively.

Personnel belonging to the FSA offices at those enterprises received instruction at the advanced training institute of the Ministry of the Electrical Equipment Industry and master the principles of functional cost analysis. In the collectives, FSA principles were taught to other specialists. FSA councils and offices coordinate the work of task groups that are established for the purpose of conducting functional cost analysis of specific items with the appropriate enterprise subdivisions. Recommendations approved by the FSA council are accepted for implementation and are incorporated in the enterprise's annual plan for new technology.

The figures cited are a convincing confirmation of the effectiveness of FSA. Unfortunately, this method has still not been widely diffused. Why is this so? After all, at every enterprise specialists are working on the problem of making rational use of supplies, raw materials and energy resources. Why are some achieving significant successes while others throw up their hands in despair?

In my view, the misfortune of the latter is that they are not sufficiently systematic in their approach to an important problem and that they do not study the problem in its relation to other things. Therefore their work is also ineffective. Moreover, at enterprises that have for a long time produced the same type of product the dominant view is often that when production technology is well organized it is useless to seek ways of economizing material resources. Since I myself was until recently a plant manager, I can easily understand the temptation to adopt such a position.

The erroneousness of this position is convincingly shown by the experience of enterprises that try to determine the optimal relationship between the quality of an item and the cost of its fabrication and operation and use functional cost analysis in the effective search for ways of realizing economies. It can be said that the use of this method is a kind of reference point for the creative approach to the problem. Indeed, the FSA method basically classifies all expenditures as either necessary or superfluous. The first group includes the minimum expenditures that are necessary for the fabrication and utilization of items or products that perform certain given functions. Expenditures that are the result of design flaws, technological imperfections, the incorrect choice of materials or ineffective manufacturing methods are considered additional or superfluous. It is this part of the expenditures that becomes the object of analysis.

A seminar-conference "On the Problem of Introducing Functional Cost Analysis at Republic Enterprises" was held in Riga in May of last year for the purpose of introducing principles of the FSA method. Heads of FSA services of the Leningrad "Elektrosila" Production Association, the Kaunas Polytechnical Institute and Riga enterprises shared their experience at the seminar. At the seminar, it was resolved to create a republic council for FSA for the purpose of coordinating the work. The Riga Electric Machine Building Plant Association is the basic center of the branch and is also an advisory center on functional cost analysis for republic enterprises.

After the conference, we distributed the Basic Principles of Methods of Functional Cost Analysis approved by the USSR State Committee for Science and Technology to all republic ministries and departments and requested leaders to report on the possibility of applying this method in practice. A work plan was compiled for 1983 and the functions of the republic FSA council were formulated in more concrete terms. The plan devotes principal attention to the dissemination of the experience of introducing FSA and to the training of FSA specialists.

The answers of managers of enterprises of union subordination (and they comprise a considerable number in Latvia) to our requests give us food for thought.

Their answers indicate that many enterprises have used the FSA method successfully for several years. It was introduced at the "Latpishchemash" pilot production plant in 1981. The "Biokhimreaktiv" Science-Production Association and the "Straume," "Kompressor" and "Stankonormal'" plants have begun using FSA.

However, answers of another type were also received from the managers: "It is not feasible for us to employ this method," "We do not consider it possible to use FSA," "At the present time, there is no need to institute functional cost analysis." Reports of the unfeasibility of using FSA were in particular received from such enterprises as the RAF microbus plant, the Ventspils Fan Plant, the Daugavpils Drive Chain Plant and the Central Planning and Design Office of Mechanization and Automation. The justifications given for certain refusals indicate that the authors of the letters have a very vague understanding of the actual FSA method and of its potential. Also unfounded are references to the lack of specialists with a mastery of the principles of functional cost analysis and methodological and practical leadership on the branch scale.

As regards republic ministries and departments, the insolvency of such positions is best of all demonstrated by the practice of the Latvian Ministry of Local Industry. An order issued by Minister A. Rubiks clearly differentiated stages in the organization and development of FSA work. The "Progress" Science-Production Association was designated as the base enterprise in the branch; a program has been developed; instructors have been assembled and the training of specialists has begun. Diploma projects have already been assigned. Enterprises are establishing FSA councils, are developing a complex of documents and are regulating the application of FSA. The

example of the republic's Ministry of Local Industry attests first and foremost to the great effect that can be attained by an energetic approach. The republic FSA council sees its task as seeing to it that this experience becomes the property of other ministries and departments in the republic.

Considerably broader opportunity is enjoyed by union ministries that have research and design organizations at their disposal. The practice of the Ministry of the Electrical Equipment Industry, for example, shows the high effect that can be obtained when the FSA is introduced throughout the entire branch and has a mighty scientific base. It seems to me that the situation is particularly opportune when a branch and a territory are interested in introducing FSA.

Drawing upon the experience of electrical equipment industry enterprises situated in the republic, we can now actively promote the introduction of functional cost analysis in machine building and metalworking associations and plants. But total success can be guaranteed if we work hand in hand with branch leaders, especially with the Ministry of the Machine Tool and Tool Building Industry, the Ministry of Construction, Road and Municipal Machine Building, the Ministry of Machine Building for Animal Husbandry and Fodder Production, and the Ministry of the Automotive Industry which have many enterprises in Latvia. There is a need for still greater initiative by the leadership of the food, chemical, microbiological, light and other branches of industry: after all, each of them has their own specific type of production and on the scale of the republic it is impossible to train FSA specialists for each branch and to elaborate methods for introducing it. It also appears expedient to examine the question of introducing functional cost analysis in other branches of the national economy--in construction, in transport and in the service sphere.

The planned search for production reserves with the aid of FSA requires a great deal of organizational work. It is essential that officials at all levels of management, designers, technologists and economists master the principles and apply it ably in practice. Success here depends on the correct and active combination of branch and territorial aspects of management. In this regard, we deem it essential to create under USSR Gosplan a council for functional cost analysis that would coordinate this work in the nation's economy.

[illegible]
[illegible] 18.09/135

REVISIONS IN ECONOMIC REGIONS OF USSR

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 4, Apr 83 pp 124-125

[Article by Professor V. Pavlenko, doctor of economic sciences]

[Text] The territorial development of the national economy of the USSR is planned with regard to union republics and large economic regions. Accordingly, the network and structure of economic regions that are the basis for preparing statistical data and plan indicators are very important. The system of economic regions must correctly reflect the principles underlying their formation--economic specialization, compactness of territory, etc. Like the system of administrative territorial divisions, our system of economic regions is stable. However this does not exclude the possibility of making necessary revisions following the careful, comprehensive examination of proposals. Based on the most intensively critiqued proposals, on 19 November 1982 the USSR Council of Ministers adopted the decree "On Revisions in Economic Regions of the USSR" in accordance with which two revisions (ratified by a September 1963 decree of the CPSU Central Committee and USSR Council of Ministers) were made in the makeup of economic regions.

The first of these revisions concerns the Northwestern Region. A component part of this region is the Northern Economic Region, which includes Arkhangelsk, Vologda and Murmansk Oblasts, the Karelian ASSR and the Komi ASSR. Formerly, the Northwestern Region was not only the largest region in the European SSR (occupying 30 percent of its territory) but was also extremely heterogeneous in production specialization and levels of economic development. Leningrad and closely associated oblasts--Leningrad, Novgorod and Pskov Oblasts--were characterized by a highly developed manufacturing industry that operated using shipped in fuel, raw materials and supplies. The specialization of the remaining part of the region was based on local natural resources--timber, fuel-power and mineral.

Machine building accounts for approximately 40 percent and light industry accounts for roughly 18 percent of the Northwestern Region's total industrial output. In the Northern Region, the share of the fuel-energy branches and metallurgy is 34 percent and the share of the timber and wood processing industry is 25 percent.

The Northern Economic Region, which covers an area of approximately 1.5 million km^2, is now the largest and at the same time most sparsely populated region in the European part of the country. The greater part of the region has a highly developed timber industry and produces lumber, pulp, paper and cardboard. Typically "maritime" branches--the fish industry, shipbuilding and ship repair--have developed on the Barents and White Sea coast. Also located here are major seaports--Murmansk (the only ice-free port in the northern part of the country) and Arkhangelsk. Other leading branches of industry have developed on the basis of local mineral resources.

The iron ore fields of the Karelian ASSR (Kostomuksha) and Murmansk Oblast (Kovdor) are the raw material base of one of the nation's major metallurgical plant--the Cherepovets plant which is situated in the western part of Vologda Oblast in direct proximity to the Northwestern Region. Murmansk Oblast is also characterized by the development of nonferrous metallurgy (the production of nickel) and the mining and chemical industry which produces apatite concentrates for the majority of phosphate fertilizer plants in the USSR. The Northern Onega bauxite deposit is being worked in Arkhangelsk Oblast. The Komi ASSR's deposits of high-quality coal (Vorkuta), natural gas (Vuktyl), and oil (Ukhta) are of significance to the entire nation; the Komi ASSR also has industrial deposits of bauxite and titanium ores.

Even in its present makeup, the Northwestern Economic Region (Leningrad, Leningrad Oblast, Novgorod Oblast, Pskov Oblast) is still one of the most highly industrialized regions as a result of Leningrad's vast production potential. The Northwestern Region surpasses the Northern Region in total industrial output (1.5 fold), in population and in gross agricultural output. The Northwestern Region's economy will further specialize in the most highly skilled branches of machine building, in light industry and in intensive suburban agriculture.

The second revision made in the economic regions of the USSR concerns Bashkiriya--the largest autonomous republic in the European part of the country. From the first attempts of Soviet regionalization, the Bashkir ASSR was viewed as an integral part of the Ural Economic Region. In 1962, it was incorporated in the consolidated Middle Volga Sovnarkhoz for the purpose of unifying the management of the oil and petrochemical industry which developed on the basis of raw materials of the Volga-Ural oil fields and was accordingly assigned to the Volga Economic Region.

But practice has shown that this status complicates the planning of economic and social development of the Volga Region and especially of the Ural Region. The point is that the Bashkir ASSR is wedged between contiguous oblasts--Chelyabinsk and Orenburg Oblasts--of the Ural Economic Region. In its economic structure and basic specialization, the eastern, mountainous part of Bashkiriya does not differ from the adjacent rayons of these oblasts and has common economic development tasks and close economic ties with them that have grown even stronger following the completion of construction of the Beloretsk-Karlaman and Muraptalovo-Orenburg rail lines. In other regions of Bashkiriya, various types of machine building have become highly developed on the basis of Ural metal and local labor resources. As a result

of the circumstances described above, the Bashkir ASSR is now a part of the Ural Economic Region. The area of the latter has thereby been made more compact and conditions have been created for improving the planning of its development and for making transport and economic ties more efficient.

COPYRIGHT: Izdatel'stvo "Ekonomika". "Planovoye khozyaystvo". 1983.

5013
CSO: 1820/136

END

END OF
FICHE
DATE FILMED
Sept 2, 1983